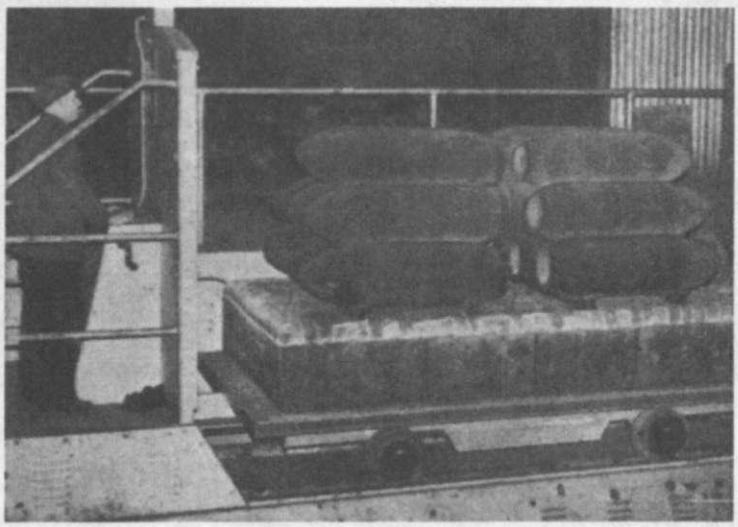
Vol 7 The War Illustrated N° 176

SIXPENCE Edited by Sir John Hammerton MARCH 17, 1944

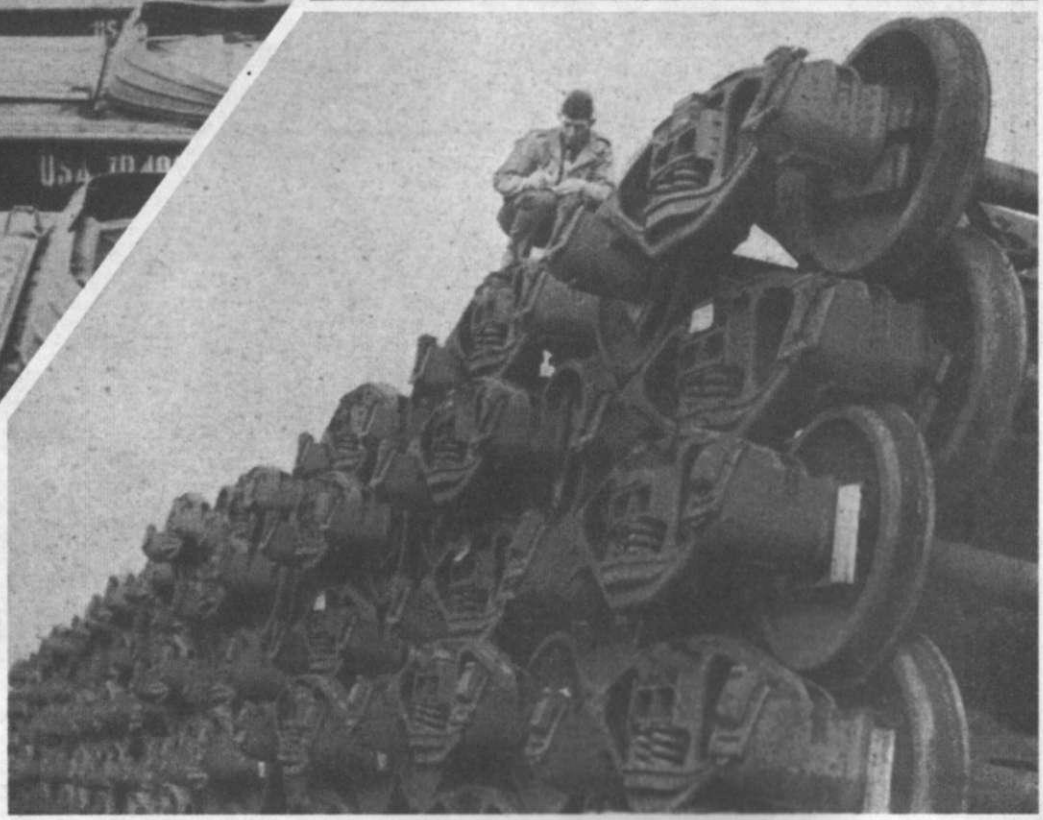
THROUGH BATTLE'S SMOKE TO VICTORY will go special Royal Marines formations as spearhead of the Allied full-scale landing in Europe. Marines are here seen training in England, charging with the new 8·5-in. triangular bayonet which now largely replaces, on active service overseas, the 17·2-in. flat-bladed type. This gallant Corps, now rich in battle honours, was formed on Oct. 28, 1664, when King Charles II sanctioned the raising of a regiment for sea service. See also pp. 628-630 and 672. *Photo, Planet News*

Our Roving Camera Inspects 2nd Front Stores



500-lb. BOMBS STACKED in the open, ready for use, at an Allied Ordnance Depot in England, contrast violently with the peaceful farmer and his sheep (above). More are in preparation (right) where a worker is seen removing bomb-cases from the electric annealing ovens after the heating process.

DUCKS FROM THE U.S. arrive with masses of other war material to back the Allied drive to victory. These amphibious landing craft may soon move eastward to imprint their tracks on the territory of Hitler's "fortress." See also illus. pp. 301 and 656-657.



COMPLETE RAILWAYS will go with the Allied forces: British and U.S. technicians are working 24 hours a day assembling thousands of tons of rolling stock. An American soldier, perched on top of an enormous pile of wagon wheels (right) checks the stock.

Photos, Associated Press, Fox Photos, New York Times Photos

THE BATTLE FRONTS

by Maj.-Gen. Sir Charles Gwynn, K.C.B., D.S.O.

ITALY Kesselring's attacks on the Anzio beach-head, which began about a fortnight after the landing on Jan. 22, 1944, are interesting to study. They started, apparently, as a number of fierce local counter-attacks, no doubt intended to secure points of tactical advantage and to disturb the organization of the forward defences of the beach-head. They may have been partly exploratory and partly defensive in character pending the arrival of reinforcing divisions. Nevertheless, about the time I last wrote, aided by bad weather which grounded Allied aircraft, they had gained a substantial amount of ground and had developed a formidable offensive operation, indicating that Kesselring had assembled sufficient forces to make a determined effort to retrieve the opportunity he had lost of counter-attacking before the beach-head could be well established.

After some days of intensive and testing fighting this first wave of the offensive was brought to a standstill, and a short pause occurred. It was quite evident, however, that Kesselring was assembling his available forces for a further effort. In due course it was made, this time as a typical blitzkrieg attempt at penetration by armour and storm troop infantry, supported by great concentrations of artillery and considerable air attacks. After some three days' desperate fighting the spearhead of the offensive penetrated the forward defences of the Allies on a narrow front, but failed to break through their main zone of resistance. Moreover, the width of the gap made does not appear to have been materially increased by the fanning out, which has always been an essential feature in German attacks after initial penetration on a narrow front.

As a consequence, the whole main thrust became caught in a pocket under the converging artillery fire of the defence, in which naval guns were also able to co-operate, and by concentrated air attack. In the circumstances the enemy must have suffered immense casualties, not only among troops actually committed to the attack but among those moving up in support, which would be particularly vulnerable to air attack. It is probable, however, that as so often has happened in Russia, artillery was the decisive weapon in checking penetration by armour. In the event the enemy failed to hold all the ground gained, and was driven back some distance by counter-attack. That the counter-attack did not regain more was probably in turn due to the enemy's artillery, which had exceptionally good observation points. I do not in any way suggest that infantry and tanks played a secondary part in the battle; they were fiercely engaged, but the conditions certainly would seem to have been such as to make artillery the decisive factor.

There can be no doubt that von Mackensen, who commanded the German Army engaged on the Anzio front, in this second attempt made a maximum effort. His army is reported to have consisted of 9 divisions out of Kesselring's total force of 18. Six of the nine he put into his main thrust, leaving only three to contain the Allies on other sections of the perimeter. In view of the losses he has sustained it seems improbable that von Mackensen with his own resources could renew his attack with any prospects of success, unless he receives large drafts to replace casualties. He may, however, by relieving the divisions on his defensive sectors by depleted divisions, and by using such drafts as he receives to strengthen the divisions which have suffered least, build up another formidable offensive force which might be further strengthened by divisions from Kesselring's southern army.

It must be expected that after some such re-shuffling process Kesselring will order von Mackensen to renew his offensive at least once again, but it seems improbable that he will be given any more reinforcements from other theatres. He has already received one from France and one from the Balkans, the latter of inferior quality, and with the Russian front so far from being stabilized none could be spared from there or from such central reserves as exist. How far Kesselring can afford to denude his southern front is difficult to judge. He has so far successfully held the Cassino position, and there are other strong positions behind it. But his troops have been under heavy strain and need frequent relief.

RUSSIAN ADVANCE on the great German Baltic bastion of Pskov, Lake Peipus area, on Feb. 28, 1944, is shown by converging arrows there, and near Dno which fell to the Red Army on Feb. 24. In White Russia they were menacing Bobruisk.
Courtesy of The Daily Telegraph

On the 8th Army front he has latterly been under less heavy pressure, but with the prospect of improving weather it might be dangerous to weaken his defences, for the Pescara-Rome road must be more than ever an important link in his system of communication. On the whole, two or three divisions would seem to be the most that Kesselring could give von Mackensen so long as he is determined to hold his southern front in strength, and that would not provide a much stronger offensive force than had previously failed. It is possible, however, that he might decide to hold his southern front as a rear-guard delaying position while he concentrated a maximum force against the beach-head. That would be a gambling course, for if the major effort failed it would probably make it difficult to re-establish as strong a defensive position as he has now.

On the other hand, if the former course were taken and Mackensen failed to achieve a decisive victory it would probably be practicable to revert to the purely defensive policy pursued before the landing, especially if the attack reduced the offensive potentialities of the Anzio force. It is evident that Kesselring has no fear that the Allies will attempt landing in the north, because he has moved all his reserves from northern Italy, which he had retained there previously to meet that contingency.

The landing, admittedly, has not achieved its original purpose, and the enemy's reactions to it were probably not what were expected; but its effect on the general military situation is undoubtedly valuable. It has compelled Kesselring to engage his whole force with the addition of divisions drawn from other theatres, and has immensely increased the rate of his losses and expenditure of war material. That may be quite as important as the political effect of the capture of Rome.

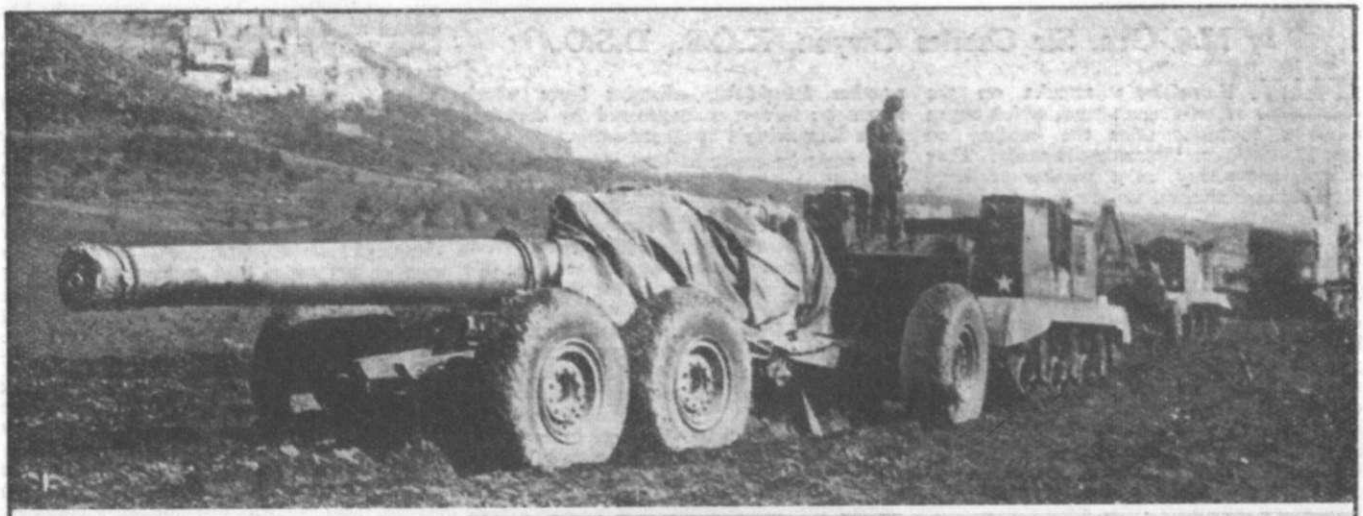
RUSSIA In Russia the Red Army has maintained its amazing offensive power, and appears even to have gained fresh impetus since there has been a recurrence of more normal winter weather. The Germans on almost the whole front are in retreat, but it is a retreat forced on them by a series of defeats and not one voluntarily undertaken on a well co-ordinated plan. How far retreat will carry them, and what rallying position they hope to reach, is still uncertain. They still seem unwilling to withdraw from Estonia, presumably in the hope of influencing Finland's decision, and while they remain there they must hold on to Pskov as long as possible.

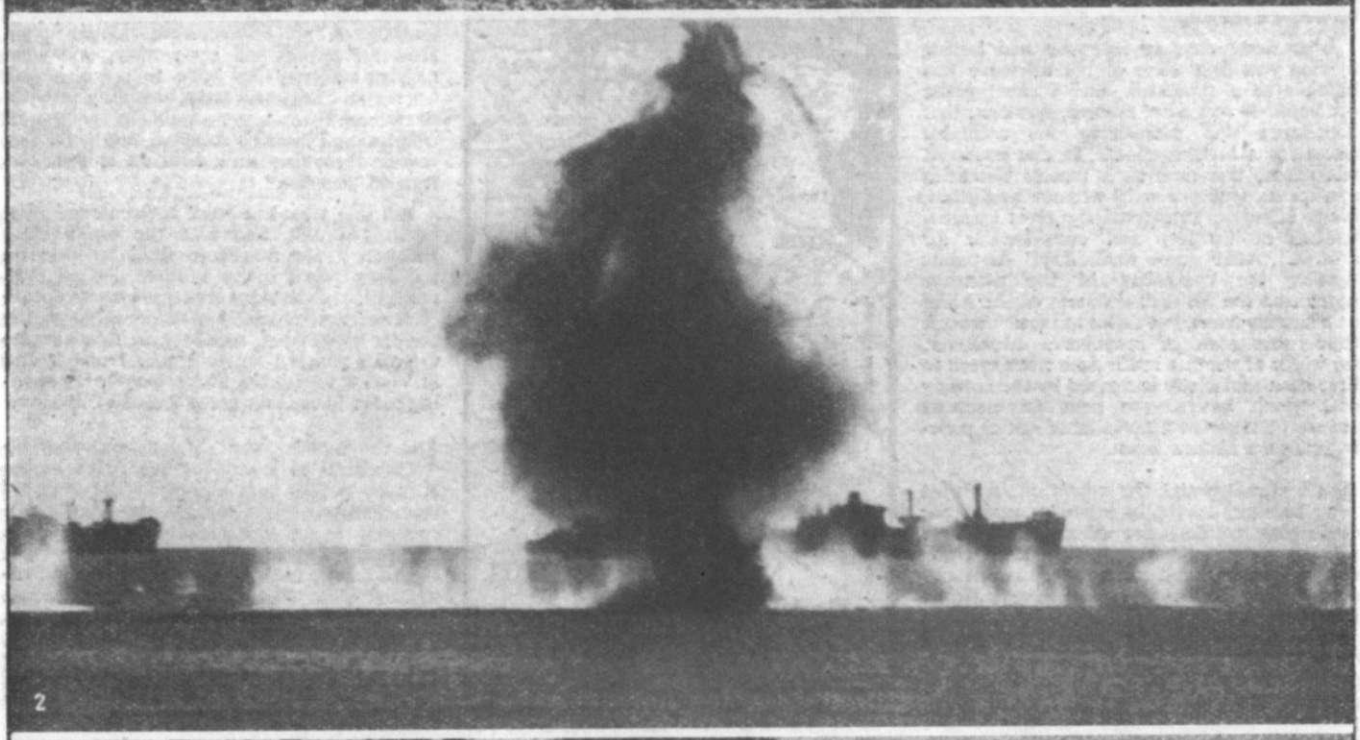
But that great key-point is threatened from north and east, and with the whole front between it and Sokolniki fluid to hold on too long might invite another disaster. In the centre of the front Rokossovsky's capture of Rogachev, probably made possible by the change of weather, seems likely to make the German position on the Upper Dnieper and at Vitebsk untenable, and it may be an opening move in another great Russian offensive.

In the south, von Manstein's abortive attempts to rescue the 8th Army in the Kanyev pocket only added to the scale of that disaster. Now Vatutin and Koniev can combine in an unhampered drive towards the Bug. The situation on Vatutin's right in the Rovno region is at the moment somewhat obscure. There may be a pause pending a further advance, for probably the Germans have brought in reserves to meet a very threatening situation. Farther south, the capture of Krivoi Rog was a notable success, and the Germans paid a heavy price for holding it so long; and though they probably extricated the bulk of their troops they are now certain to be fiercely pursued by Malinovsky's and Tolbukhin's armies. Here again there is no sign of a well co-ordinated voluntary withdrawal, but rather of a forced retreat involving heavy losses in rearguard actions demanding heavy sacrifices. As a result of their retreat the Germans may at last reach a shorter front on which to rally, but it will be with depleted divisions and without having shaken off pursuit.

It is a matter of opinion whether the Germans may in time retire to the inner citadel of the European fortress, but there are no indications that that is their intention. Personally, I adhere to the view I have previously expressed, that they will be compelled to fight to a decision on the outer perimeter. They may still hope that Russia can be fought till she is exhausted, and therefore cling to untenable positions even at the risk of disaster. Their action in Italy and the retention of the army in Norway and other outlying sectors all point to the same policy. The immensely increased weight of the Allied air offensive serves to emphasize the necessity of keeping at a distance the bases from which it is conducted, and it must be expected that the fiercest fight of all will be on the western wall of the outer perimeter.

From Cassino Front to Beach-Head below Rome





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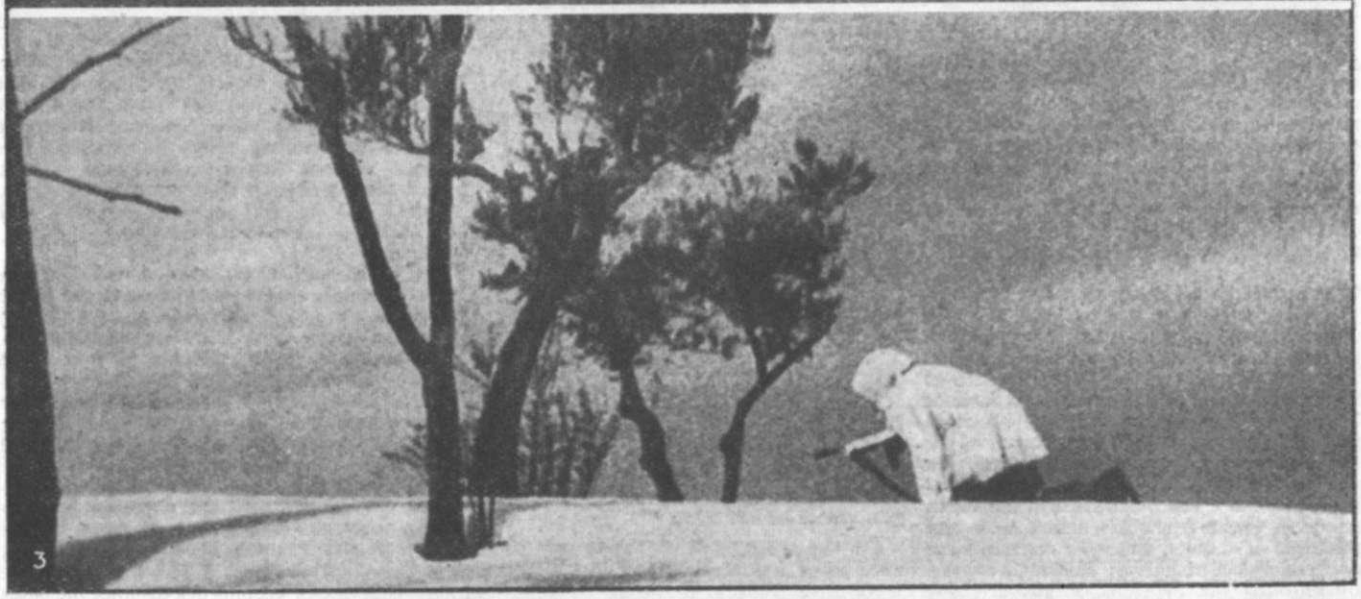


3

A BIG GUN OF THE 5TH ARMY in Italy moves into position to fire, along with many others like it, on German positions at Cassino and beyond ; the gun (1) is a 9·5-in. long-range type, throwing a very heavy shell. Splinters spatter the water and a smoke column rises (2) as the enemy bombard Allied supply ships off Anzio beach-head. A snow-camouflaged New Zealander of the 8th Army goes out on patrol ; even his tommy-gun is covered with white material (3).

Photos, British Official ; Planet News

Red Guards Push Westward with Colour Flying

WITH THEIR REGIMENTAL COLOUR fluttering in the icy breeze, these Red Guards (1) push on in pursuit of the enemy ; for their share in the relief of Leningrad they were awarded the Order of the Red Banner, which Stalin himself gained in 1919. At the commencement of the city's final liberation an armoured train (2) bore the inscription "For the Fatherland, For Stalin, Fire at the Enemy." From beneath a Nazi anti-tank gun whose crew he has destroyed, Corporal Mekhalev does further havoc with his machine-gun (3). Troops of the Leningrad front had by March 2 crossed the River Narva and were approaching the town itself some 150 miles west of Leningrad.

Photos, Pictorial Press

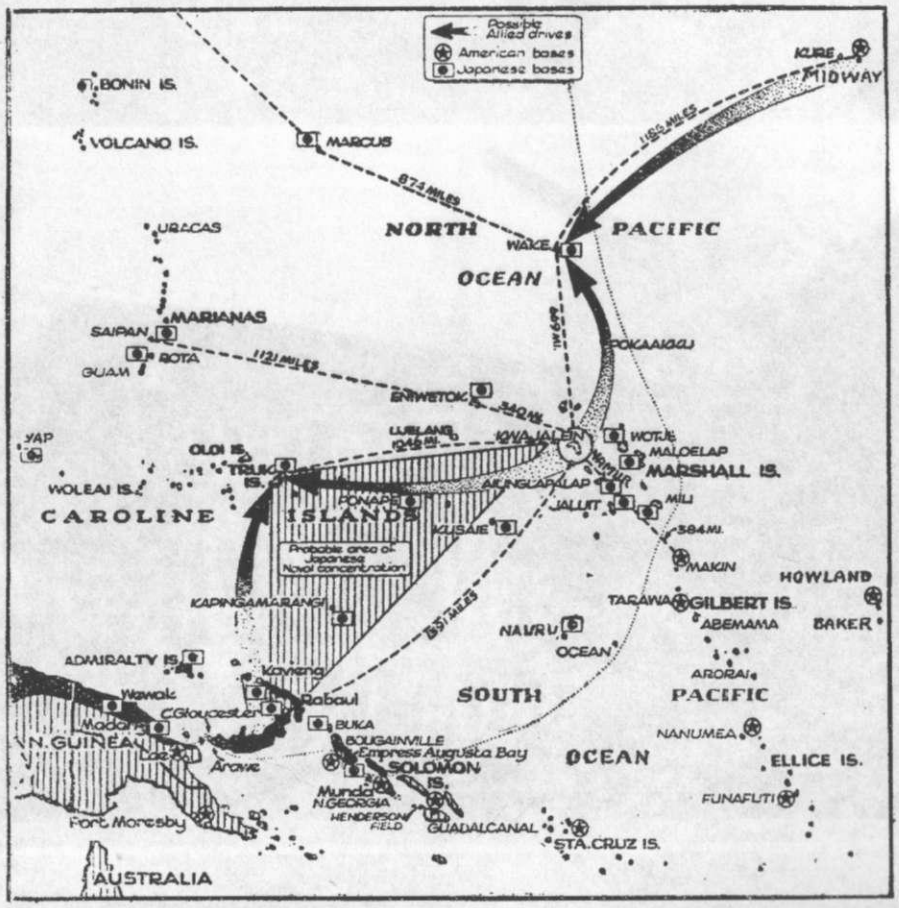
THE WAR AT SEA

by **Francis E. McMurtrie**

RECENT operations in the Western Pacific afford an excellent example of the advantages flowing from superior sea power. On the one hand the Japanese Navy is growing steadily weaker as the result of the drain imposed by its losses in the Solomons and other areas in 1942-43, while on the other the U.S. Navy is adding to its strength almost daily by its immense programme of new construction. Thus our enemies are no longer able to withstand the fresh thrusts made at the island groups, which they had taken such pains to fortify as ramparts for the inner fortress of Japan itself.

raids on various outlying atolls in the Marshalls and on Ponape in the Eastern Carolines.

This was swiftly followed by a blow at Truk, in the Central Carolines, the main Japanese base in the Western Pacific. On February 16 hundreds of naval aircraft, launched from carriers, descended on the group and dropped bombs on all the principal islands. Battleships, cruisers and destroyers followed this up with a heavy bombardment. When reconnaissance planes had flown over the base earlier in the month there were at least 25 Japanese warships there, including a



FOOTHOLDS GAINED IN THE MARSHALL ISLANDS recently by U.S. forces, and their subsequent successful air-sea attack on Truk, Japanese naval base, on Feb. 16, 1944, will facilitate further Allied drives from the Kwajalein atoll against Truk and Wake Island. By landing in the Admiralty Islands on Feb. 29, isolation of the enemy at Rabaul was carried a stage further. See also illus. page 660.
New York Times

It was at the beginning of February 1944 that Admiral Chester W. Nimitz, Commander-in-Chief of the United States Pacific Fleet, announced a new assault on the principal atolls of the Marshall Islands ; this was preceded by an intensive bombing attack by carrier-borne aircraft, and a heavy bombardment by battleships and lighter vessels. So heavy was the preliminary battering of the enemy defences that the resistance met by the Marines who carried out the landing was comparatively feeble, compared with the stubborn opposition encountered in the Gilbert Islands in November 1943. Thus, practically all objectives were completely occupied within a week, with relatively few casualties to the American forces. The whole of the Japanese garrisons were wiped out, very few prisoners being taken, and so the United States force was left free to prosecute attacks on other Japanese islands. These began on February 14, 1944, when carrier-borne aircraft delivered simultaneous couple of aircraft carriers. Most of these had gone, but two cruisers and three destroyers were still in the area. These were sunk, together with 18 other vessels, mostly transports or supply ships. Over 200 enemy aircraft were also destroyed.

The seriousness of these losses was apparent from the fact that Tokyo admitted the above figures of warship losses, as well as the destruction of 126 planes ; evidently those caught on the ground were not included by the enemy in their figures. Moreover, the Japanese Premier, General Tojo, announced that the two Chiefs of Staff, Admiral of the Fleet Osami Nagano and General Sugiyama, had both resigned. For nearly ten years Nagano had been regarded as Japan's greatest admiral ; he represented Japan at the London Naval Conference of 1935-36, and was subsequently Commander-in-Chief of the fleet before becoming Chief of the Naval Staff. Both he and his military confrère remain on the general board of field marshals and admirals of the fleet, which acts in an advisory capacity to the Emperor.

To land at Truk would have been a much more difficult task than the invasion of the Marshalls, which are coral atolls. The numerous islands which make up the Truk group are of volcanic formation, well wooded, and with hills rising to 1,000 feet and more. Lying in a lagoon 40 miles across, surrounded by a reef, and containing plenty of deep water, Truk is ideally situated as a fleet anchorage.

ATTENTION was first drawn to the importance of Truk in a book published in 1925, entitled The Great Pacific War, by the late Hector Bywater. In the authorship of this book the present writer had a considerable share. A careful study of charts and sailing directions had shown that as an anchorage Truk was unequalled anywhere within a very considerable radius. Its relation to Japan is similar to that of Pearl Harbour, in Hawaii, to the United States. In other words, it is an important advanced base. Though the Japanese evidently do not consider it worth the hazard of fighting a major naval action, its neutralization and ultimate loss cannot fail to weaken the enemy's main defences.

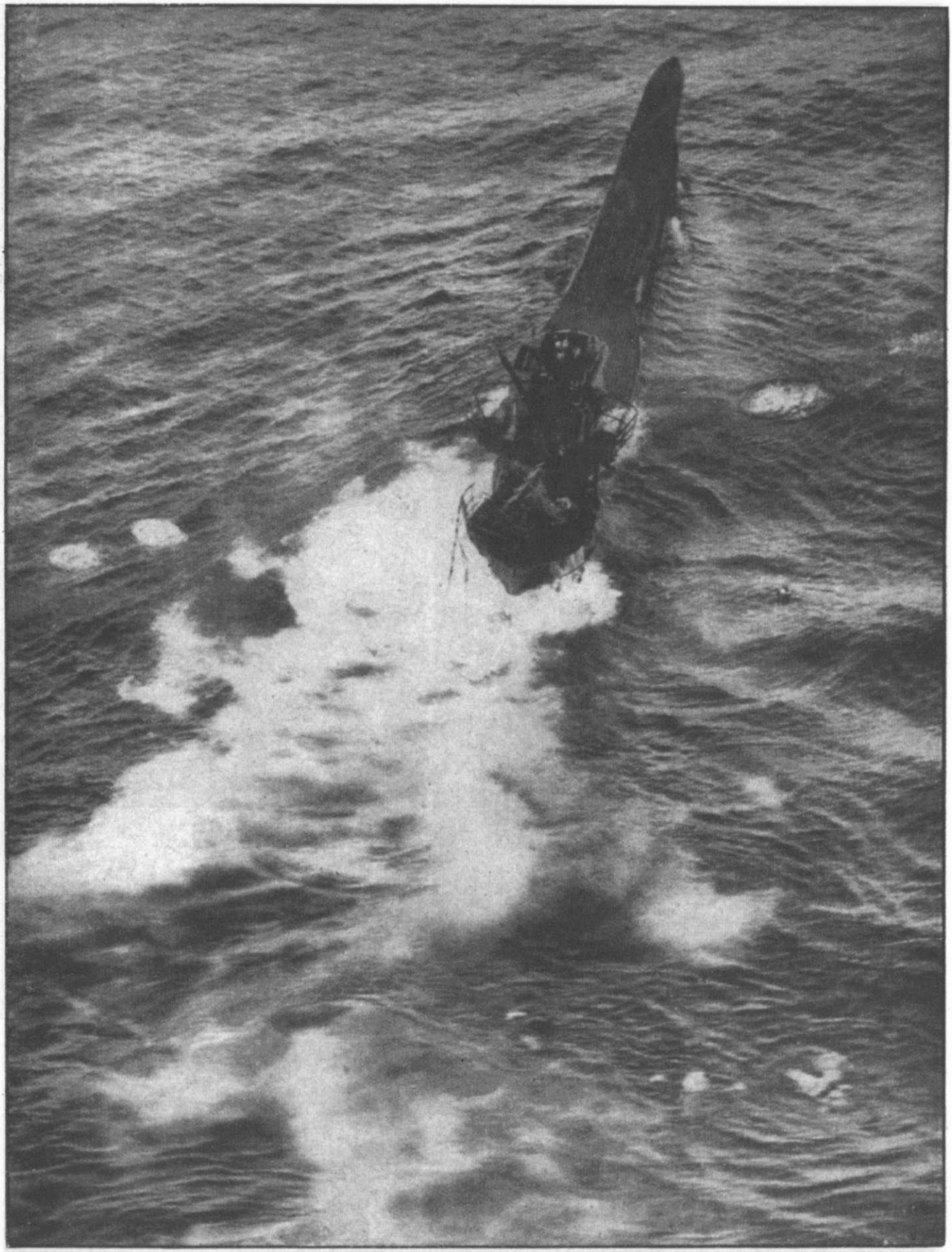
Nor did the Allied thrust stop short at Truk. Within a week, some hundreds of American planes carried out attacks on islands in the Mariana (or Ladrones) group, lying north of the Carolines, and between 1,300 and 1,400 miles from Tokyo. Guam, formerly held by the United States, and overwhelmed by a Japanese assault in December 1941, was one of the islands raided. Others were Saipan, used by the Japanese fleet as a secondary base, and Tinian.

Tinian was the landfall which H.M.S. Centurion made in August 1742, after a long and arduous passage from Acapulco, in Mexico. She was the survivor of a small squadron under Commodore (afterwards Lord) Anson, dispatched from England in 1740 to harry Spanish settlements on the west coast of South America. Having suffered greatly from sickness and bad weather, this squadron was gradually reduced to a single ship and some 250 men, but Anson's indomitable spirit carried them through many trials and dangers to ultimate success. When Tinian was reached, everyone was suffering from scurvy to such an extent that only 71 men were capable of working at all, and they were terribly enfeebled. Tinian at that date was fertile, with abundance of fresh fruit and vegetables, wild cattle and pigs, so that it proved a veritable haven of rest for the exhausted expedition.

ALL three islands are flat, without the facilities for fortification possessed by Truk. Their conquest should therefore present fewer difficulties when the time comes to follow up the preliminary attacks. With Truk, Guam, Tinian and Saipan in Allied hands, the position of Japan would be seriously compromised. Apart from air raids on Japanese cities, the seaborne trade along the eastern coast, upon which the whole life of the country is largely dependent, will be liable to attack and communications with the Philippines are also likely to be harassed. The whole series of operations was under the command of Admiral R. A. Spruance, U.S.N. Rear-Admiral Mark Mitcher, formerly commanding officer of the aircraft carrier Hornet, from which the bombing of Tokyo was carried out in April 1942, was another of the flag officers engaged.

It looks as though the enemy forces in the islands of New Britain and New Ireland, and on the neighbouring coast of New Guinea, estimated at 50,000 will now be abandoned to their fate. How long it will be before Truk is occupied depends on a variety of circumstances ; but it is unlikely to be left unmolested in the meantime.

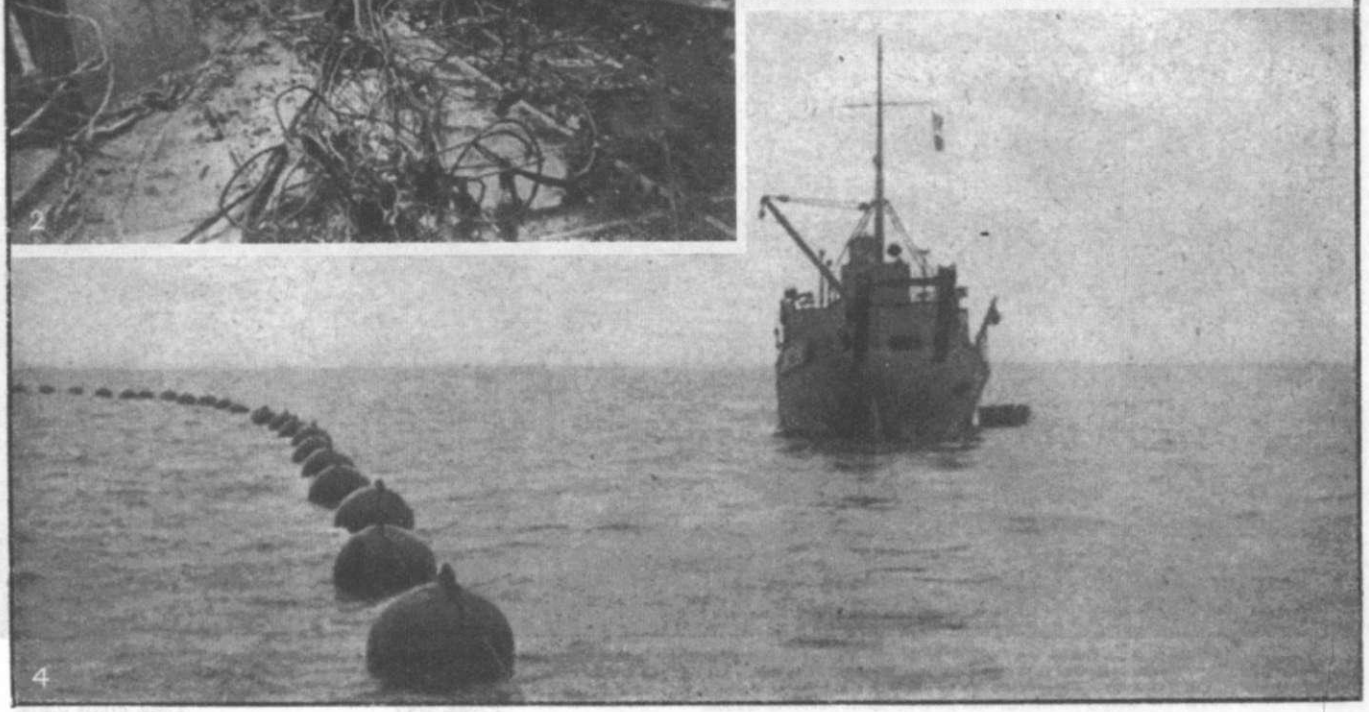
Going Down for the Last Time: End of a U-Boat



COASTAL COMMAND SCORES YET AGAIN in the Bay of Biscay; its prey is this German U-boat, sinking as the Sunderland which caught it circles to make another attack. It was Coastal Command's first 1944 kill. Searching for U-boats from the Arctic to near the Equator, Coastal Command, which at one time had only a limited range around the shores of Britain, has now flown 100 million miles in more than 100,000 sorties, which include attacks on U-boats and enemy shipping, and photographic reconnaissance.

Photo, British Official

Royal Navy Keeps Watch Over Boom Defences

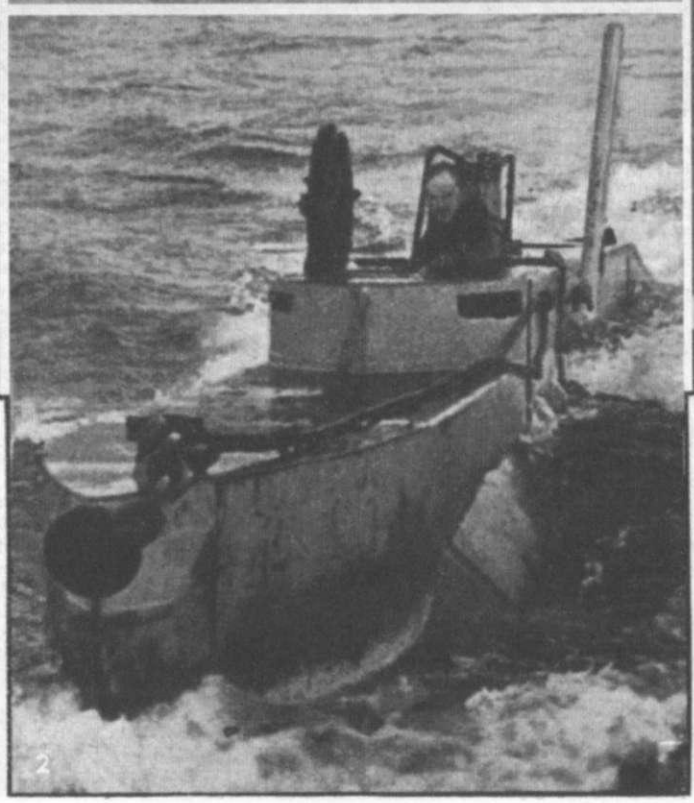


GUARDING SHIPPING at anchor in our ports, harbours and other waterways is the special task of units of the Royal Navy, who keep in repair the great boom defences around our shores. These defences consist of miles of steel anti-submarine and anti-torpedo nets and heavy wire hawsers suspended below the surface at varying depths by means of giant steel buoys, taken to the site by boom defence vessels manned by seamen, engineers, stokers and riggers.

A boom defence Maintenance Vessel (1, left), and a Gate Vessel, which opens the boom itself to allow ships to pass in and out (right), are at work hauling in a steel cable for repair; another Maintenance Vessel (4) arrives at a boom to examine the huge buoys. Miles of lost steel cable from damaged torpedo nets have been salvaged from the sea (2); a punctured buoy weighing 5 cwts. (3) is brought in, one of hundreds forming a boom measuring nearly five miles in length.

Photos, Topical Press

These Are Our Intrepid Midget Submarines



THE VICTORIA CROSS has been awarded, it was announced on Feb. 23, 1944, to Lieut. B. C. G. Place, D.S.C., R.N. (3) and to Lieut. D. Cameron, R.N.R. (4), for their supreme courage when, as the commanding officers of two of H.M. midget submarines, X6 and X7, they carried out, on Sept. 22, 1943, a daring attack which crippled the German battleship Tirpitz, moored in the heavily protected anchorage of Kaafjord, North Norway. Through miles of fjord patrolled and protected by anti-submarine and torpedo nets, they manoeuvred their tiny craft after a passage of at least 1,000 miles from their base, successfully dealt with their objective, and then scuttled their vessels to prevent them falling into enemy hands. The two commanders, with most of their crews, were taken prisoner.

SIZE OF THE X-BOATS may be judged from these photographs of one under way (1), with a member of the crew on deck by the periscope, and another showing the hatchway open (2); so small are they that there is probably insufficient room for their personnel to lie down at full length or to stand up properly. From their perilous positions within the screen of nets protecting the Tirpitz, and from a range of only 200 yards, X6 and X7 got to work. There was an enormous explosion. It lifted the huge bulk of the battleship and left her completely crippled. In the words of Rear-Admiral C. B. Barry, "It was, in fact, another answer to the ever-recurring naval problem of how to deal with an enemy ship which will not come out to sea and fight."

 Photos, British Official

Northern Ireland's Place in the Allied Ranks

Where stands Ulster in the war strategy of the United Nations? Whilst Southern Ireland has preferred to remain neutral in this war, the counties of Londonderry, Antrim, Down, Armagh, Tyrone and Fermanagh, now under the jurisdiction of the Parliament of Northern Ireland, and part of the United Kingdom, are making great and vital contributions to the Allies' common pool.

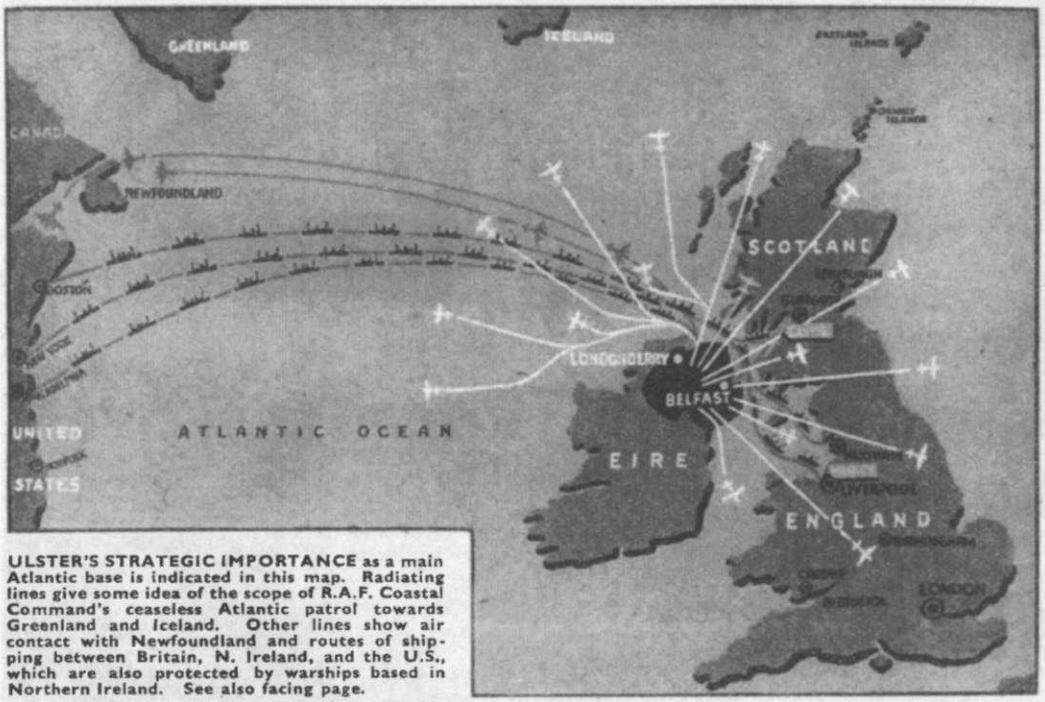
IN the period of acute crisis preceding the outbreak of war in 1939, the Parliament of Northern Ireland passed a resolution placing all the resources of the area—5,237 square miles, with a population of a little over a million and a quarter—at the disposal of His Majesty's Government. For Ulster is British to the core. Its flag is the Union Jack. Its currency is the British currency. It is part of the fiscal union of the United Kingdom of Great Britain and Northern Ireland, and it pays the same rates of national taxation.

Glowing tribute was paid by Mr. Churchill in May 1943 when, looking back to December 1940, our "dark and dangerous hour," he wrote, "We were alone, and had to face single-handed the full fury of the German attack, raining down death and destruction on our cities, and, still more deadly, seeking to strangle our life by cutting off the entry to our ports of the ships which brought us our food and the weapons we so sorely needed. Only one great channel of entry remained open because loyal Ulster gave us the full use of the Northern Irish ports and waters, and thus ensured the free working of the Clyde and Mersey. But for the loyalty of Northern Ireland and its devotion to what has now become the cause of thirty Governments or nations, we should have been confronted with slavery and death, and the light which now shines so strongly throughout the world would have been quenched."

Not only do the ports of Belfast (the capital) and Londonderry, with their excellent sea approaches, afford first-class facilities for Allied fighting and merchant ships, but shipbuilding capacity is being employed to the fullest extent. Northern Ireland built the aircraft carrier Formidable, and H.M.S. Penelope, a light cruiser so often holed in action that she has become known throughout the Royal Navy as H.M.S. Pepperpot. From Belfast came its namesake, the heavy cruiser which, as flagship of Vice-Admi. R. L. Burnett, took part in the action that resulted in the sinking of the German battleship Scharnhorst on Dec. 26, 1943 (see pp. 518-520, 570). Before the war Belfast ship construction frequently headed the world's new tonnage lists, and now the output of craft has increased by bounds.

From local air bases R.A.F. planes go out on patrol over the waters of the Atlantic. "The unprotected gaps in mid-Atlantic, the stretch of ocean which could not be covered by shore-based aircraft from either side, would have been far wider if it had not been for the Coastal Command bases in Northern Ireland," declared Mr. Herbert Morrison, at Londonderry, in July 1943: "similarly with the surface patrol craft whose range would have been lessened without the Ulster bases." It was from a Coastal Command station there that the German battleship Bismarck—afterwards sunk—was sighted.

Though aircraft construction is a modern development in Northern Ireland the wartime output of planes has reached enormous proportions; and Ulstermen are serving in all branches of the R.A.F., whilst plenty of youths below military age have enrolled in the A.T.C. Others have joined the Sea Cadet Corps. By a decision of the Imperial Government, conscription was not applied in Northern Ireland; but there has been no lack of volunteers for all the fighting and auxiliary Services. H.M.S. Ajax and Exeter, which took part in the Battle of the River Plate in Dec. 1939, are only two among many ships of the Royal Navy whose crews include men from N. Ireland; and the Ulster division of the R.N.V.R. is on active service.



ULSTER'S STRATEGIC IMPORTANCE as a main Atlantic base is indicated in this map. Radiating lines give some idea of the scope of R.A.F. Coastal Command's ceaseless Atlantic patrol towards Greenland and Iceland. Other lines show air contact with Newfoundland and routes of shipping between Britain, N. Ireland, and the U.S., which are also protected by warships based in Northern Ireland. **See also facing page.**

IT is the home, also, of famous British regiments—the Royal Ulster Rifles, the Royal Inniskilling Fusiliers and the Royal Irish Fusiliers, as well as the now mechanized North Irish Horse. The R.I.F., who celebrated their 150th birthday last year, have (it was recently announced) been fighting with the Irish Brigade as part of the 8th Army in Italy; they fought with great distinction in Sicily, and in N. Africa won many laurels. Also raised in N. Ireland are the 102nd Anti-Aircraft Brigade and the 3rd (Ulster) Searchlight Regiment.

Young soldiers' battalions were formed, at the beginning of 1941, for home service with the R.U.R. and the R.I.F., and an Army Cadet Force for boys aged 14-17 has since been formed. Several men of Ulster families hold high rank in the British forces, these including Field-Marshal Sir John G. Dill ("specially employed" since Dec. 1941); General Sir Alan Brooke, Chief of the Imperial General Staff since 1941; General Hon. Sir Harold Alexander, now Commander-in-Chief of the Allied Armies in Italy; General Sir Bernard Montgomery, now Commander-in-Chief of the British Group of Armies under General Dwight Eisenhower; and General Sir Claude Auchinleck, A.D.C. to the King.

As in the rest of the United Kingdom, war production is directly under the Production and Supply Ministries of the British Government, through the various Regional Officers in Belfast. Engineering shops have been converted to the production of a large variety of munitions. Weapons and equipment produced in Ulster played an important part in the land, sea and air fighting in the Middle East and North African campaigns and now in Italy.

FROM a rope factory which is reputed to be the largest in the world, enormous quantities of that indispensable item are being produced for the Navy, Army and Air Force. The linen industry, founded in N. Ireland 300 years ago, like the heavy engineering firms, is on war service; with a reduction in peacetime requirements, thousands of women operatives in the industry have transferred their skill to the making of munitions, and others are making aeroplane fabrics, battle-dress and so on.

To feed the factories using material made from flax, the acreage under flax crops has been increased from the pre-war figure of 20,000 acres to over 90,000. With Continental supplies cut off, the linen industry would have been crippled but for this extra flax grown in the territory of Ulster.

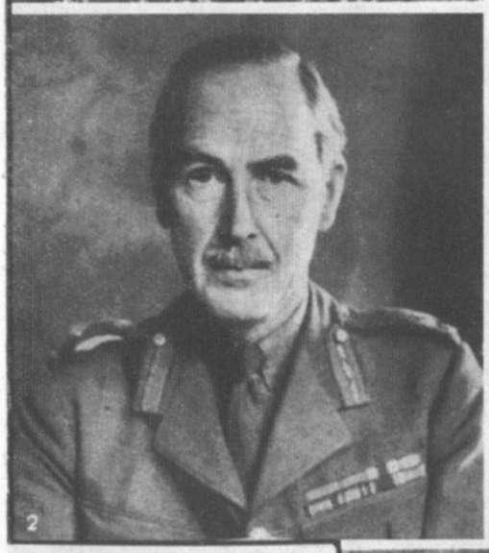
Shipments of food to Britain are on a considerable scale, agricultural production playing a most important part in N. Ireland's war effort. Agriculture is the principal industry, and in spite of the surplus produced Ulster is subject to the same controls in food rationing as the rest of the United Kingdom. Today Ulster sends us food to the value of over £11,000,000 in the year, covering such items as eggs (350,000,000 in a year), milk, fat cattle and sheep, pigs and bacon, potatoes and fruit. The canning industry has grown enormously, most of the output coming here, and the mechanization of farming has been intensified to such an extent that whereas in 1939 there were only 550 tractors in the country there are now 5,500 all fully employed.

On the financial side much also has been achieved. One instance must suffice: between April and June 1943, Wings for Victory Weeks raised well over £11,500,000. The story could be considerably extended. But sufficient has here been recorded to give background to Mr. Hugh Dalton's (President of the Board of Trade) recent declaration as to "the vitality, energy and patriotism of the people of Northern Ireland," and to Mr. Oliver Lyttelton's words: "Ulster is a sure shield against U-boat attack."

Ulster Helps to Turn Our War Machine's Wheels

IN THIS WAR the people of N. Ireland, as explained in the facing page, are busier than ever before, in many and diverse ways. Training under realistic conditions are these A.A. gunners (1) during a recent exercise; their gun can also be used as an anti-tank weapon. G.O.C. of these and other troops in N. Ireland is 57-year-old Lt.-Gen. Sir Alan G. Cunningham, K.C.B., D.S.O., M.C. (2). In 1941 he was G.O.C. of the East African Imperial Force troops who conquered Italian Somaliland and took Addis Ababa.

Fledgling airmen of the A.T.C. (3) watch with keen interest as they are shown how to swing the prop of a plane, by a Wing Commander instructor at one of the camps attached to an R.A.F. airfield, where the boys also attend lectures and take part in many of the normal duties. Hundreds of young fellows have flocked to join the Corps; they enter on approbation at 15¼ and can be enrolled at 15½. Creation of the A.T.C. was announced by the Secretary for Air, Sir Archibald Sinclair, on Jan. 9, 1941, and it came into operation on Feb. 1. The Corps' total strength in Great Britain and Northern Ireland is approximately 200,000, this including instructors, officers and cadets.

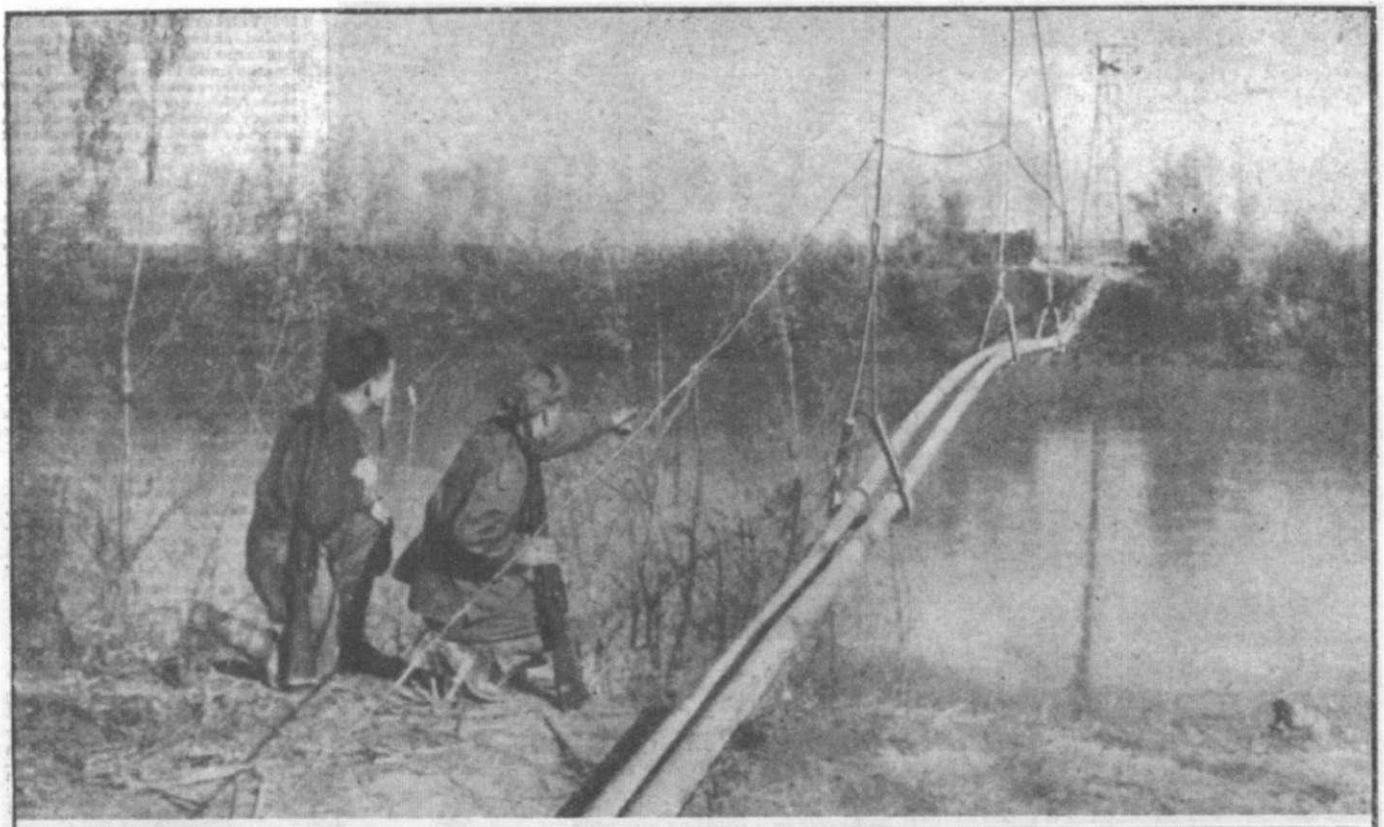


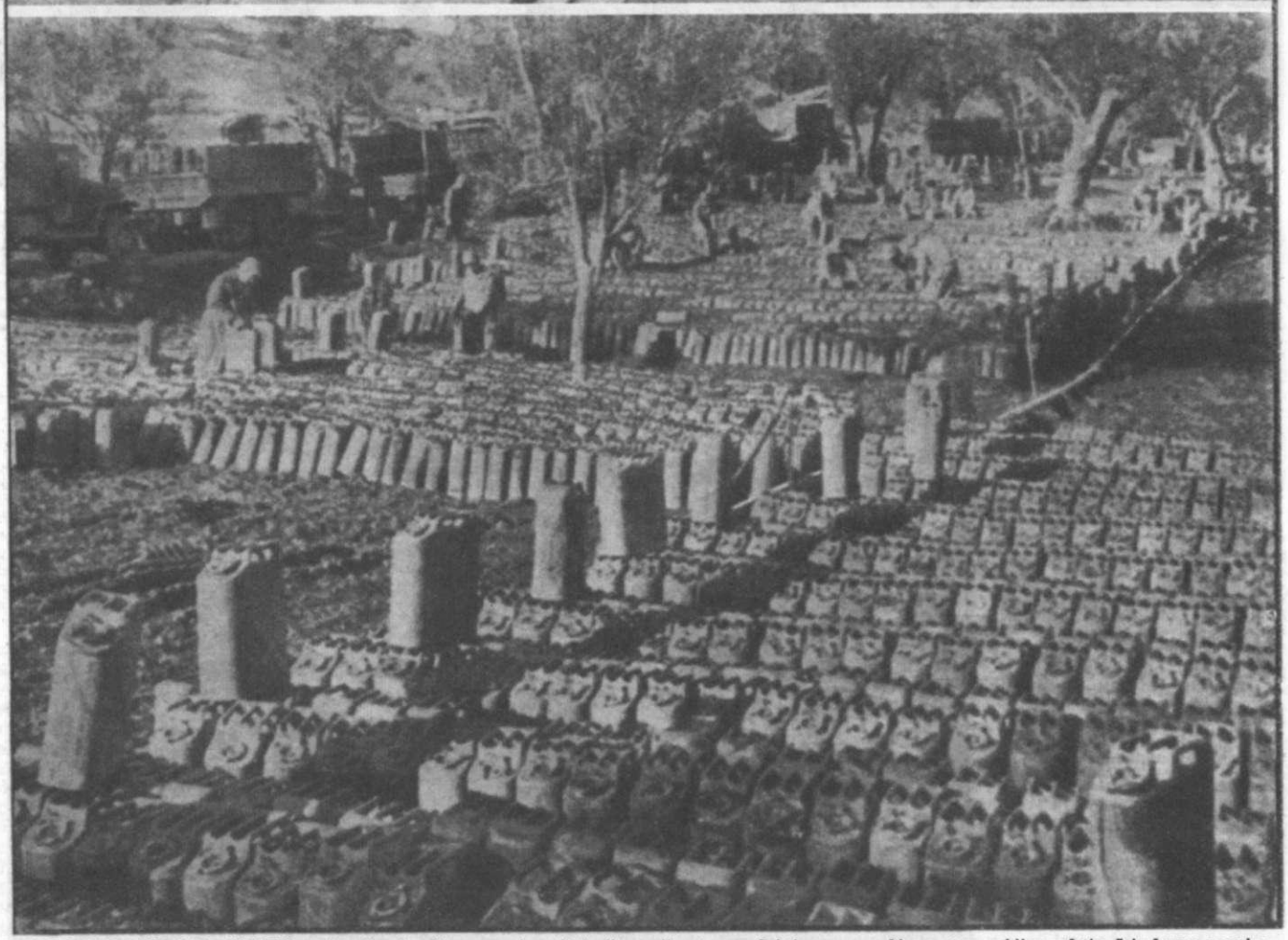
WAR PRODUCTION in N. Ireland includes the growing of over 90,000 acres of flax, from which linen is woven and items of Service equipment are manufactured, including parachutes, harness, aircraft fabric, etc., for the R.A.F. Flax-growing and conversion to its several war uses engages the considerable attention of specialists, who are continually striving to improve the quality of the flax itself and the processes.

It is not harvested like other crops, but pulled from the ground, usually by hand. Bundled into sheaves, the flax plants are placed in small water-dams (4) for the "retting" process, which enables the fibres to be separated easily from the stems. Removed from the water, the plants are spread out to dry, then re-tied in sheaves and stacked for further drying in readiness for scutching, and then spinning before weaving.

Photos, British Official: Crown Copyright; Pictorial Press

5th Army Gets Oil by Pipe-Line from the Coast





ACROSS LAND AND WATER snake the pipe-lines carrying vital oil supplies to our fighting men. Above, two soldiers of the 5th Army guard a double line which engineers have slung across a river, suspended by steel wires and cradles from towers on either side ; it runs from an Italian port to a depot just behind the main Allied front. At this terminal point (below) troops load great numbers of filled oil containers on to trucks for distribution to the units in the field.

Photos, New York Times Photos

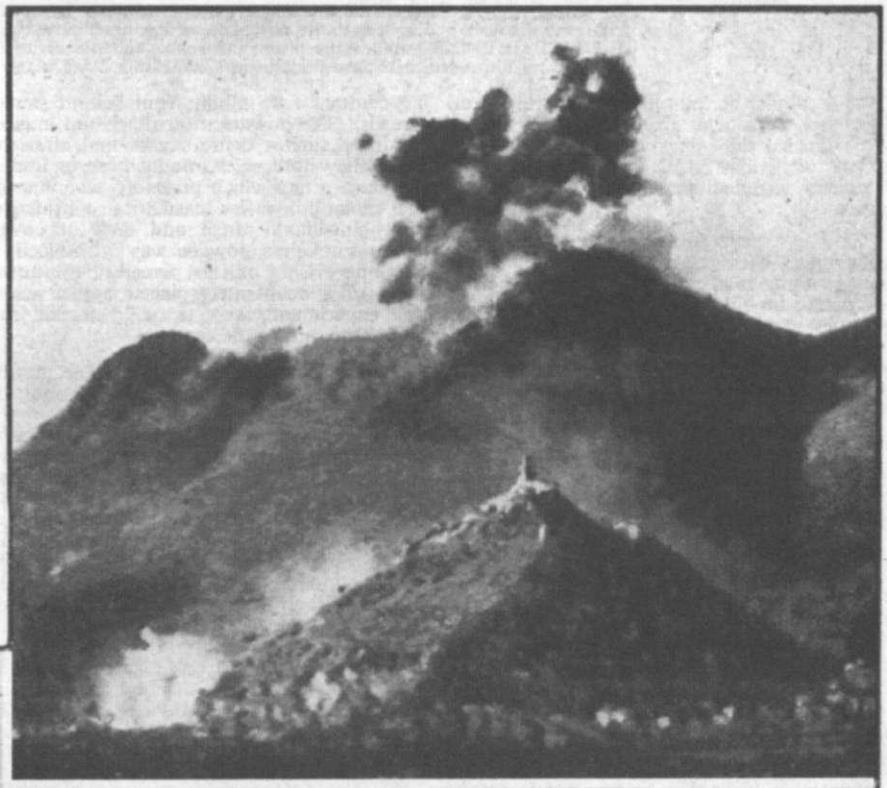
Venerable Pile That Became a Nazi Fortress

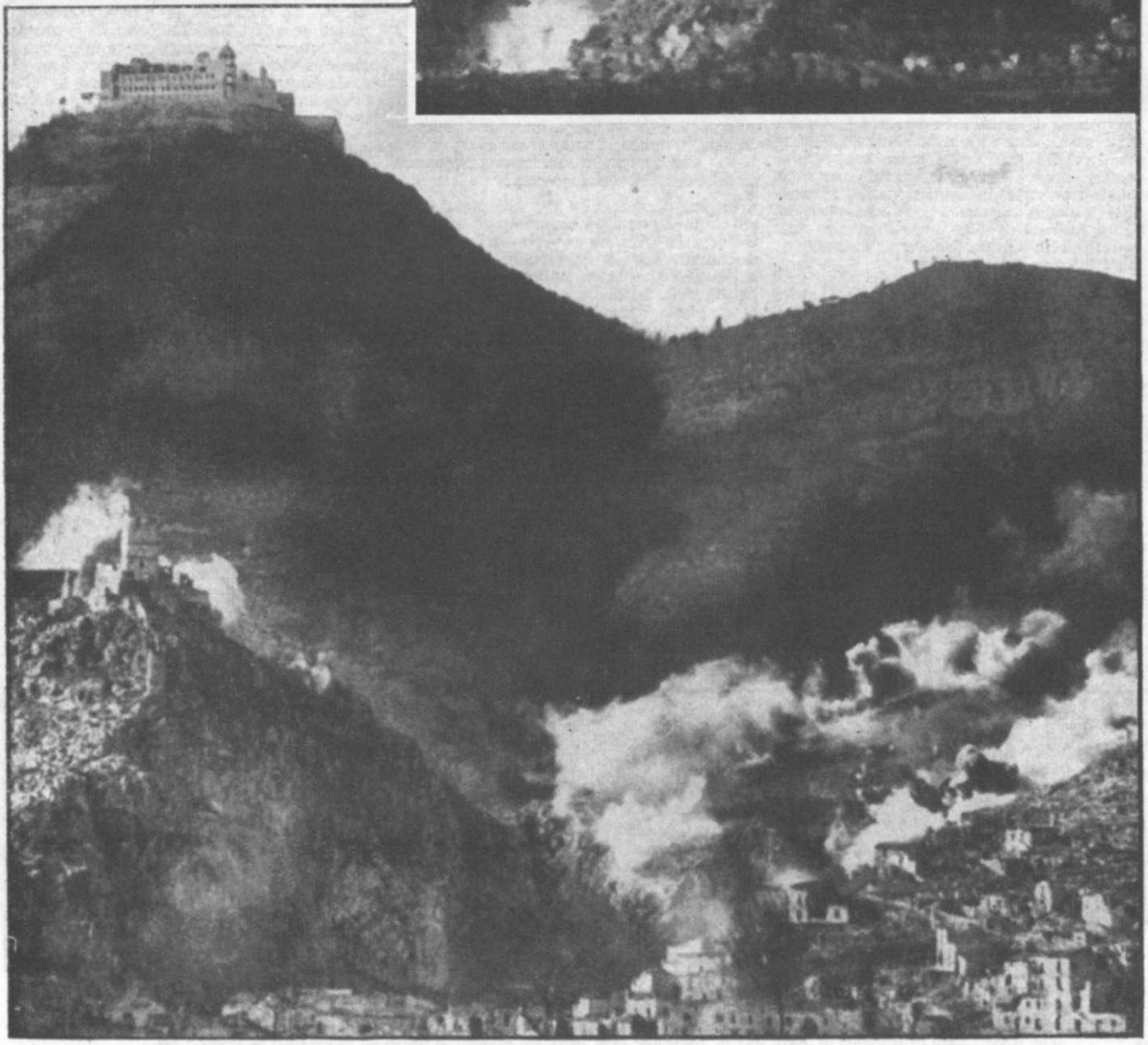
MONASTERY OR MAN? was the burning question which had to be decided by the Allied Command during the attack by the 5th Army on the town of Cassino, overlooked by the great, grey monastery which the Germans, despite official Nazi denials, were using as a strongpoint to hold up our advance on Rome. The Allies had refrained from turning their artillery against the ancient and historic pile, as they might well have done at the commencement of the fight for Cassino ; and still the enemy continued to direct their guns from the protection of its walls.

Mr. Frank Gervasi, Mediterranean correspondent for "Collier's Magazine," is quoted as declaring on his return to New York by air from Italy, "While the Germans were using the monastery as an observation post, I saw as many as 800 Allied soldiers go out and only 24 come back, because the Germans could see every move and turn their fire on them." Repeated warnings against this sacrilege and treachery failed to have effect, and at last, reluctantly, on Feb. 15, 1944, to save further wastage of life of our men our bombers and artillery smashed down the walls about the garrison.

Cassino Monastery, standing on top of Mount Cassino overlooking the town on the valley slope at its foot (below), as it was before the Allies were forced to neutralize it ; right, obscured by the burst from one of the bombs dropped by our aircraft after a final appeal to the German garrison to withdraw had been ignored. See also p. 655.

Photos, U.S. Official





'Cloak of Invisibility' Gives Life—or Death

In warfare today applications of the smoke screen are highly technical developments of rough-and-ready methods dating back to the early days of organized battle. In this fascinating account ALEXANDER DILKE outlines the history of smoke, for offence or defence, from the earliest recorded instance to its present status as a standardized and widely employed weapon.

It is almost certain that when we invade the Continent from the west smoke screens will play a big part. They saved many lives at Dieppe, where R.A.F. bombers screened the landing of numerous units.

Smoke screens laid with the precision of an artillery barrage to hide the movement of troops are a modern invention. But the use of smoke to blind an enemy is probably as old as systematic warfare. The earliest recorded instance is the smoke screen which covered the retirement of the Israelites from Egypt, recorded in the 14th chapter of Exodus. The pillar of cloud "came between the camp of the Egyptians and the camp of Israel; and it was a cloud and darkness to them, but it gave light by night to these: so that the one came not near the other all the night."

At various times during the succeeding centuries, certain individual generals utilized smoke screens, but it was not until the middle of the war of 1914-1918 that their great value in attack and defence was fully realized. Amongst the historical instances of the use of smoke screens those of Caesar and Pompey are of special interest, for they used them to cover landing operations in the same area where fighting took place in 1943.

Until the development of modern chemistry the means available for producing smoke were crude; but it is astonishing that commanders did not make more use of the smoke screen. Drake seems to have used smoke to conceal his ship from the numerically superior Spaniards off the coast of South America, but on land we have to wait until the 17th century for further instances of the deliberate use of smoke.

Probably the chief difficulty was that of enveloping the enemy in smoke instead of their own troops. To generate smoke immediately in front of the advancing forces, or for the advancing troops themselves to carry smoke-candles, was to invite disaster, for the smoke simply blinded—and probably choked—the users, and the defenders had only to fire into the smoke cloud to be fairly sure of hitting something.

The basic principle in the use of smoke is that it must be laid over or near the enemy. This was realized both by Gustavus Adolphus and Charles XII of Sweden, both of whom used smoke to enable their armies to cross rivers in the face of opposition. The problem of carrying the smoke to the enemy was solved by building special smoke-generating barges which were propelled across the river before the attack began.

In a sense, all battles that raged during the last century were fought from behind smoke screens. The powder of artillery and musket produced such a dense smoke that after the first volley both sides fought more or less in the dark, a fact which probably accounts for the remarkably few casualties considering the point-blank range and lack of cover. When smokeless powder was introduced, a few enterprising officers perceived the possibility of a deliberately placed smoke screen and experiments were actually carried out, before the turn of the century.

The smoke candles, meant for testing drains, which were tried at Aldershot did not, apparently, give satisfaction, for the matter was dropped. Possibly the difficulty lay in finding a method of projecting the candles into the enemy lines. Not until November 1916 were the first smoke shells used, and then not until the technique of lighting candles had been tried, with disastrous results. This was in 1915, and the smoke intended to conceal the British trenches simply drew the enemy's shellfire.

The Coming of the Tanks

Once the principle that smoke must be projected had been driven home, the British went rapidly ahead, and Arras, in 1917, saw the smoke screen laid by the artillery to blind the well-established enemy. The Germans quickly imitated the British methods; and smoke, both for offence and defence, became a standard weapon on every battlefield. The coming of the tanks gave opportunities for new developments.

In the present war the Germans themselves have provided testimony of the effectiveness of British smoke material and technique used in conjunction with tanks. A German correspondent broadcasting on the El Alamein battle said the British used a new smoke screen of "unbelievable" efficiency. He described how the British artillery firing "artificial fog" shells laid down a milky wall of a depth, width and thickness never before seen. Out of this wall the tanks appeared right in their midst, having penetrated unseen.

The Nazis have made considerable use of smoke for blinding the defenders of fortified positions. According to a German commentator, the smoke is provided by specially trained "fog troopers," completely motorized and organized like artillery regiments. They emphasize the "panic" effect of artificial fog on the defenders, firing at an enemy they cannot see, losing touch with even the men standing next to them.

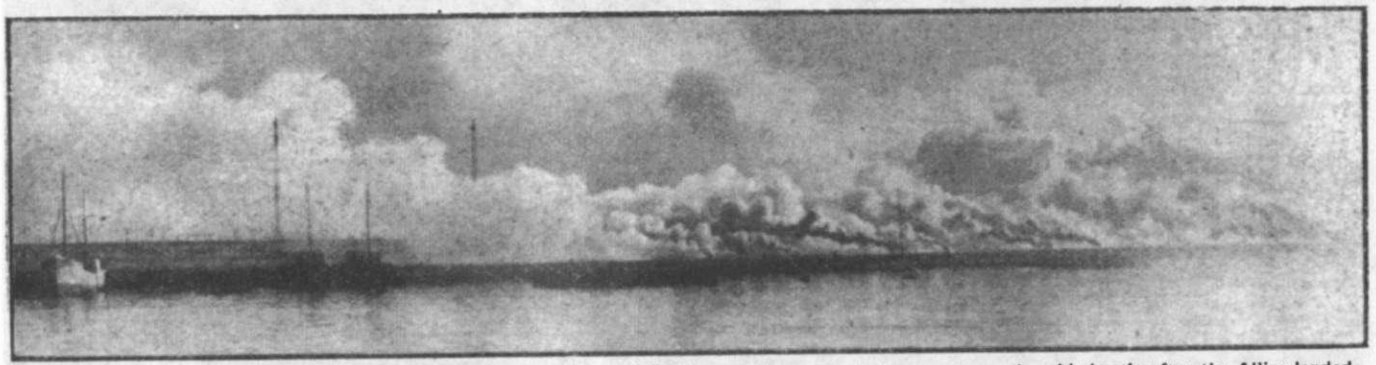
The Nazis made great use of smoke in attacking Russian strongholds. It was probably this that gave rise to accusations of "poison gas." Whether the smoke was actually poisonous does not seem certain. At the time of the attack on the Caucasus, the Cologne Der Neue Tag published a letter from a German soldier at the front, eulogizing their new smoke screens, produced by shells from mortars. He spoke of the effect of the smoke on the eyes of the defenders, and ended, "Before we dismantle our guns we look once again at the Soviet forts. Nothing moves. The silence of the graveyards reigns everywhere. The infantry advances, and the hotly-contested point is ours." The account was remarkable in suggesting that the point was subdued by smoke without the use of explosives.

The Germans are putting smoke to another use. They have tried to screen some of their munition centres from bombing by creating smoke when the R.A.F. is signalled. The technique has not been successful. The modern R.A.F. concentrated raid does not give time for the smoke to obscure the target.

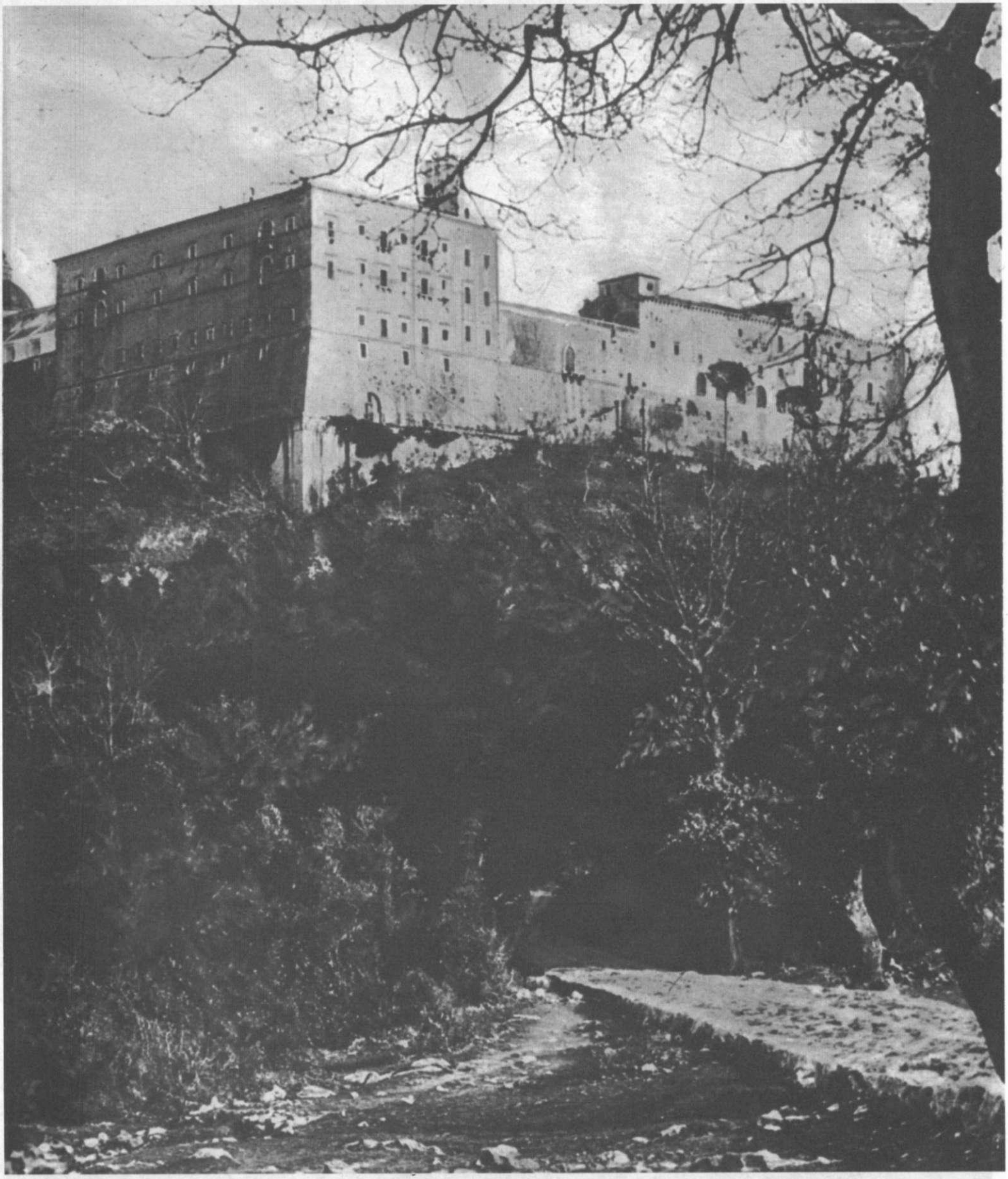
Apart from the use of smoke from damped fires at sea, the generation of smoke screens by chemicals is a highly technical matter in which constant research proceeds. The requirement of countless minute opaque particles to be produced from a comparatively small amount of material is not easy to fulfil. Compounds of phosphorus are extensively used. The oxide of the comparatively rare titanium has the property of dividing into minute opaque particles—it was used for making air mail paper opaque. Smoke generators may make use of particles formed in combination with the moisture of the air.

Smoke can be projected in grenades, mortar bombs, shells and aerial bombs. Aircraft laying a smoke screen like "sky-writing" have been tried, but bombs seem to be the better method. Smoke bombs were used at Dieppe, and a number of awards were made to pilots of the planes charged with the difficult and dangerous mission of laying them precisely. Wing-Commander Wilfred Surplice who was awarded the D.S.O. (see portrait p. 292, Vol. 6), made the first smoke sortie; and upon the accuracy of the smoke bomb delivery depended not only the success of the subsequent smoke-laying operations, but, to a great degree, the success of the whole combined operation.

At sea, smoke has been used not only by destroyers to cover ships they are protecting, but also by merchant ships to screen themselves. Special smoke-generators beside the stern gun were introduced on merchant ships in the last war. Many warships, especially those of the Axis, owe their survival to the fact that if air is cut off from oil furnaces dense black smoke is produced in quantities.



ALGIERS HARBOUR BEGAN TO DISAPPEAR as a smoke screen drifted across its length during an enemy air raid shortly after the Allies landed there on Nov. 8, 1942. In the battlefield, mortars and guns put down a screen from their bombs and shells which are usually of light or medium type. The tank has proved invaluable as a fast screen-layer. Latest improved smoke-compound to be used by British troops enables more to be packed into the container, thus producing a denser smoke. *Photo, British Official*



Photo, Topical Press

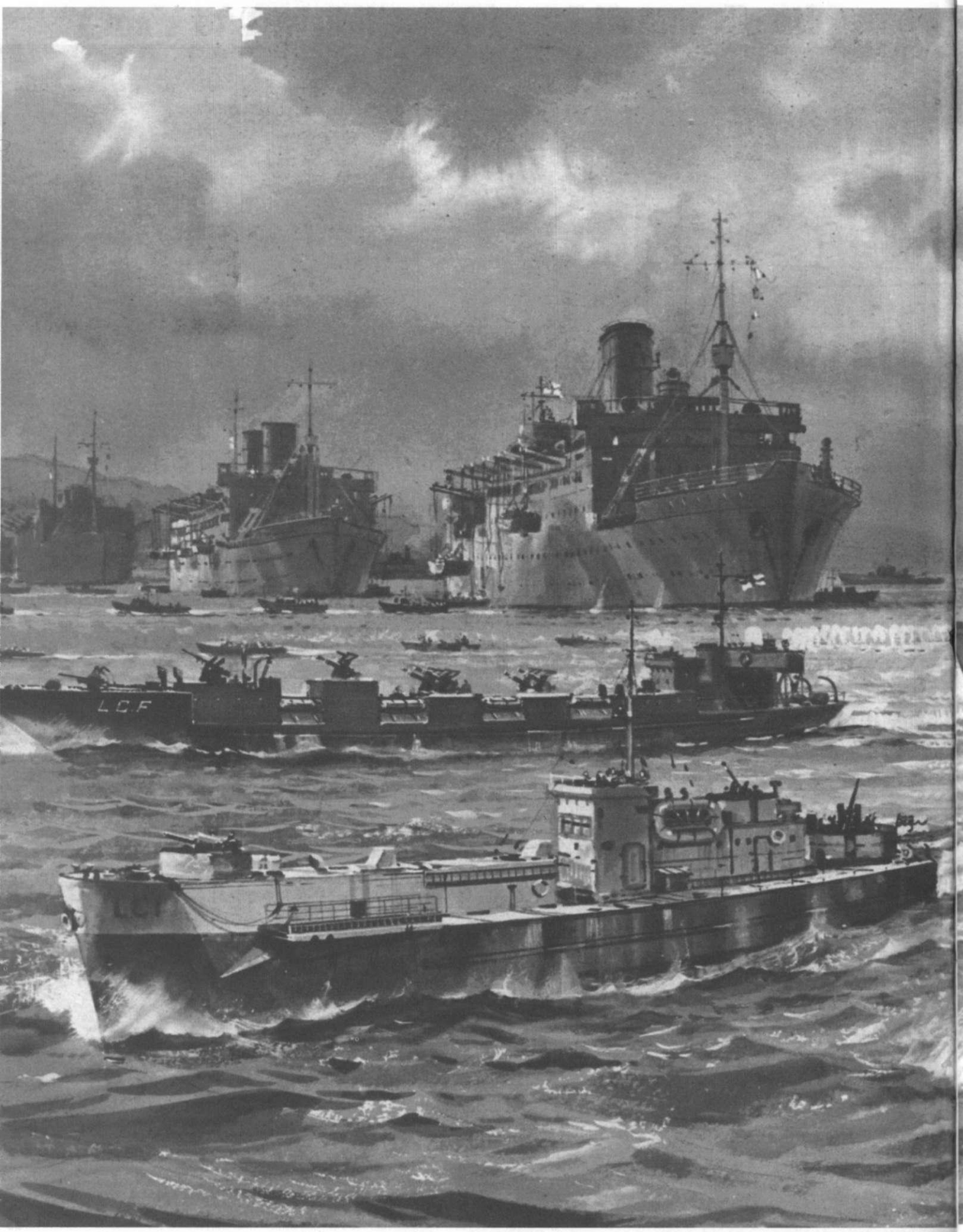
Cassino's Sanctuary Used for Shelling 5th Army

Perched 1,800 feet above the road to Rome, the vast, castle-like Cassino Monastery was founded by St. Benedict in the year 529. The centuries swept on, and war engulfed this shrine of learning and of faith. The Germans opposing the 5th Army made of it an observation post, and presently an armed fortress: and so that many precious lives might be saved and the advance of Deliverance no longer be delayed the Allies were compelled, in Feb. 1944, to reduce it to ruins. See p. 653.

Sea Craft to Free the World

Flying the White Ensign of the Royal Navy, landing craft of manifold types make possible victorious advances from the sea: the climax of their usefulness will be apparent when the Allies descend in full force upon the mainland of Western Europe. On their bows is lettering to identify them: LSI (left background) are anchored landing ships from which assault craft are being lowered; LCF, major landing craft armed with A.A. guns; LCI, the latest type of infantry landing craft; LST, tank-landing ship; LCS, support craft; LCT, landing craft carrying tanks, guns and heavy equipment; LCA, landing assault craft; lower right, an amphibious duck (see illus. p. 301).

Drawn by C. E. Turner. By courtesy of The Illustrated London News



Modern Frigate as Escort to Allied Convoy

Drawn by C. E. Turner. By courtesy of The Illustrated London News

Germany's wolf-packs of the underseas recognize the latter-day frigates of the Royal Navy as in part responsible for the great toll exacted of them. H.M.S. Helmsdale, representative of the River class, and here seen tossing in a North Atlantic swell, helping to protect the convoy looming dimly in the misty distance, flies the signal "VJ" (Vinegar Johnnie, in Service parlance) bidding the vessels to keep station : for the merchant ship that strays becomes an easier U-boat target.

VIEWS & REVIEWS Of Vital War Books

by Hamilton Fyfe

A Grim Chapter in Australia's War Story

We have heard a lot about the neglect of defences and precautions at Singapore. We know how the surprise attack on Pearl Harbour, in December 1941, with its disastrous consequences, was made possible by the slackness and complacency of naval officers commanding there. Less has been written about the easy wins Japan had in New Guinea and other Pacific islands. In New Guinea Diary (Gollancz, 10s. 6d.) by an Australian war correspondent, Mr. George H. Johnston, blame is ladled out to the Australian authorities with a freedom that no British or American newspaperman would adopt.

"Australians are paying dearly for their errors of the past. They say there's no sense in crying over spilt milk. But perhaps we can be permitted to shed a silent tear or two for the things we didn't do in the years that the locust hath eaten, things that could have been done but weren't and things that shouldn't have been done but were. 'Our little friends the Japanese'—the phrase was used more than once in the years before the Second World War began—are raining bombs on Australian territory and that these bombs contain scrap metal exported from Australia is . . . a probability."

There was a small outcry against letting Japan have this scrap metal. Some people thought it was for bombs which would be used against the Chinese. But the protest was disregarded. Business came first in the minds of the scrap metal merchants. "And now," says Mr. Johnston, "we're getting a few of those bombs ourselves."

That, he charges, was only one instance of fatuity. For years it had been known that Japan was making most careful and systematic investigation of everything in the waters of North Australia and the surrounding island groups. Every Japanese pearling lugger had a naval officer on board. A dirty little Japanese 200-ton steamer used to run regularly between Truk and Rabaul and as far sometimes as Port Moresby. "She never seemed to carry any cargo, but nobody worried very much about her. Then when Japan struck in the South Seas the Truk-Rabaul supply line became enormously valuable to the aggressors." Rabaul has been the centre of the operations against New Guinea. Truk was turned into "an immense defence arsenal for future aggression," and the base from which the enemy forces holding what they gained at the beginning have been munitioned and fed.

These places have been in the news for a long time past. Lately they have figured more prominently. But very little was said about them in the Australian Press while the Japs were charting every anchorage and every reef "and knew the defence set-up like an open book."

We pottered around, doing a little bit here and putting the rest off until the weather got cooler . . . It was generally agreed there would be plenty of warning when the time came. Rabaul had about a week's warning! And you can't manufacture anti-aircraft guns in a week from coconut palms. The one commanding fact of this war is that you don't get warning of what is coming."

New Guinea was called by the white people who lived there "the Land of Tomorrow" When the Spaniard doesn't feel active, he says *Manana*. When the Russian procrastinates he murmurs *See chass*. The Chinese have a word *Maskee* for use in lazy moods. All mean the same thing, "no hurry," as the word *Dehori* in the language of the New Guinea people. The white people who went to Papua adopted it and themselves lived in the spirit of it.

Papua is the part of New Guinea that was mandated to Australia. It is, according to Mr. Johnston, a very rich country, but its riches have so far been left by the Australians almost untouched. If they had been developed it could be producing for Australia "almost every commodity that Japanese aggression has taken from us." Its agricultural possibilities are tremendous. Sugar, tobacco, tea, coffee, cocoa can be grown with every prospect of success. Quinine and nutmegs have been grown experimentally. Sisal for rope-making is prolific. Rubber could be cultivated on a vast scale; it grows wild there. Minerals, too, abound. There is coal in immense quantities and of proved high quality. Copper, gold, manganese, lead, iron, silver and a host of other valuable substances can be mined, including wolfram (chief ore of tungsten, which is used in making special steels, etc., and for munitions), which we are trying to stop Portugal and Spain sending to Hitler. None of these possibilities has been tapped in the twenty years Australia has had Papua to govern.

Excuse must be found in the climate which disinclines to activity and encourages "smug self-satisfaction." Anything that called for exertion beyond the ordinary could be put off, "and in the Tropics even thinking is sometimes arduous."

The laws of tropical behaviour ordain a great deal of "lolling back in cane chairs, sipping long drinks, and discussing hangovers of the night before." Only exceptional white people can be energetic in the tropical countries, people who take care of their health and take themselves seriously and do not take many drinks. So it came about that within a few weeks of Japan striking the first blow, only one Australian base stood between Rabaul in Japanese hands and the Australian mainland.

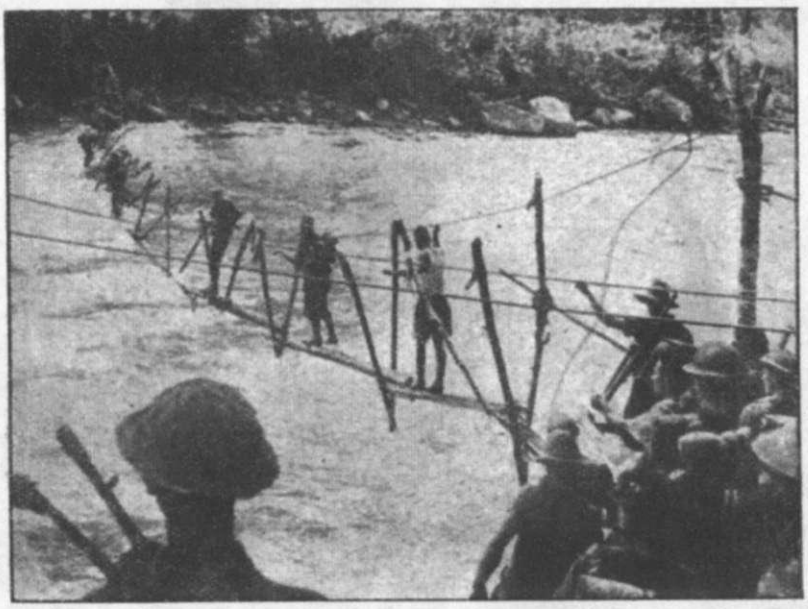
This was Port Moresby. We have heard a good deal about that too. General Morris, in command of the New Guinea Force, spoke of it as the Tobruk of the Pacific. If the enemy had taken it, it would have given them the chance to carry out direct air assaults on Australia. So long as we held it, it was a barrier to his advance. It used to be a sleepy tropical port with a splendid harbour and an inner anchorage where a big fleet can lie hidden. It had one wharf and a few small jetties where vessels loaded copra. On hills round the town, which consists mainly of grass and cane huts and a few with iron roofing, are the bungalows of the white folks, ugly, decrepit and badly needing a coat of paint. Not an attractive picture, but still less attractive was Port Moresby when it had been bombed and deserted after nightfall. "In the hotels and houses, where there was the sound of tinkling ice and swing music and laughter are heard only the buzzing of insects and the kek-kek-kek-kek of the gecko lizard."

Port Moresby held out, the retreat of the Allied forces came to an end, the return journey began. The newspapers and the radio used to tell us about the battles on the Owen Stanley Range, which is the backbone of the Papua part of New Guinea. We got accustomed to the repetition of the name Kokoda, though it conveyed little to our minds.

For thousands of Australians who have walked the weary sodden miles of this dreadful footpath—and these Australians are the fathers of the next generation—it will be the one memory more unforgettable than any other that life will give them.

These were the troops who climbed every inch of the agonizing track, sometimes in burning sunshine, sometimes in cold mist, who "buried so many of their cobbers and saw so many more going back weak with sickness or mauled by the mortar bombs and bullets and grenades of the enemy, men gone from their ranks simply to win a few more hundred yards of this wild, unfriendly and utterly untamed mountain." It was what General Allen called it, "the toughest campaign of the Australian troops in this or any other war." It is described by Mr. Johnston with vivid power and full appreciation of the human elements in the grim drama.

One very interesting comment he makes on the Coral Sea engagement. It was the first time ships ever engaged each other more than a hundred miles apart, the first time a naval battle has been fought with no gunfire from ships except that of anti-aircraft guns. The attacking was all done on both sides by aircraft and it was a great victory for the Allied Nations. It is bound to affect future naval strategy. It may alter the whole conception of warfare at sea.



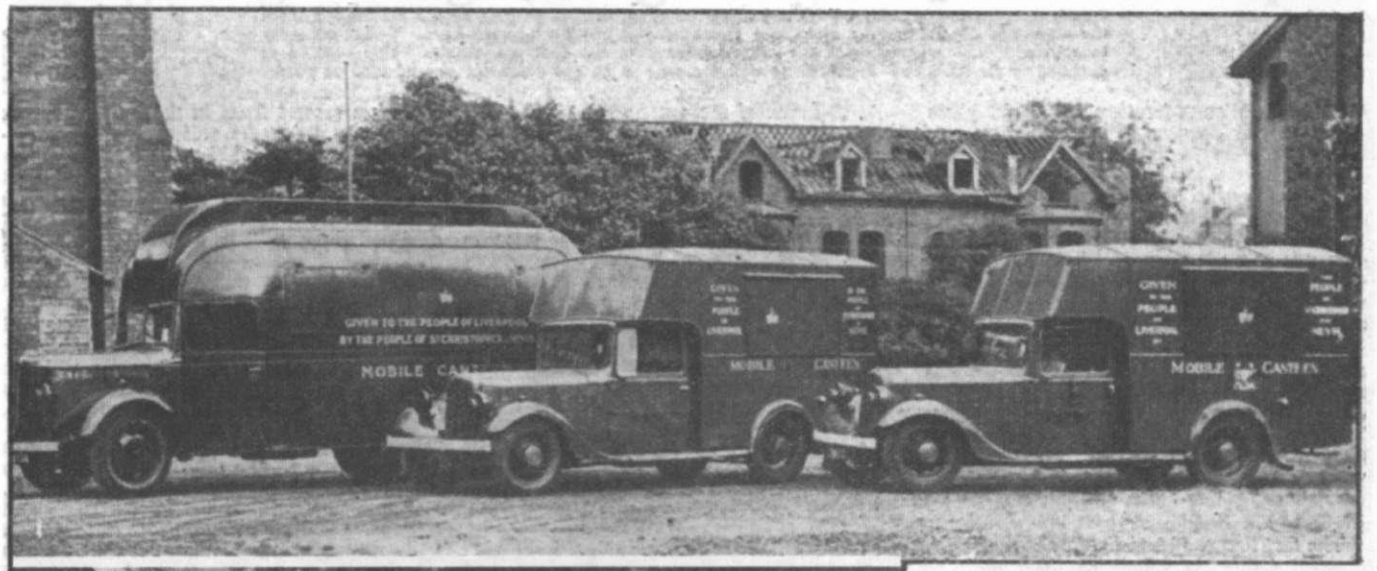
JAPAN PLANNED TO TAKE NEW GUINEA before this war began, as the book reviewed in this page reveals. Over an improvised bridge Australian troops are here seen crossing a jungle torrent on the trail from Kokoda to Buna, which they captured from the enemy on Dec. 14, 1942; since then they have pushed on N.W. round the coast some 250 miles closer to Madang. *Photo, Sport & General*

First Japanese Territory Won by the Allies

ISLAND BY ISLAND we push back the Japanese in the Pacific. On Jan. 31, 1944, U.S. forces stormed the Kwajalein group of the Marshall Islands; covering an area five times the size of Great Britain, the Marshalls were taken from the Germans by the Japanese in the 1914-18 war. American marines (top) on shell-blasted Namur, occupied by the Allies on Feb. 2; others, on Roi Island (below), containing the best airfield in the Marshalls, and also captured on Feb. 2, watch an enemy dump on Namur go up in smoke. (See map in p. 646.)

Photos, Planet News

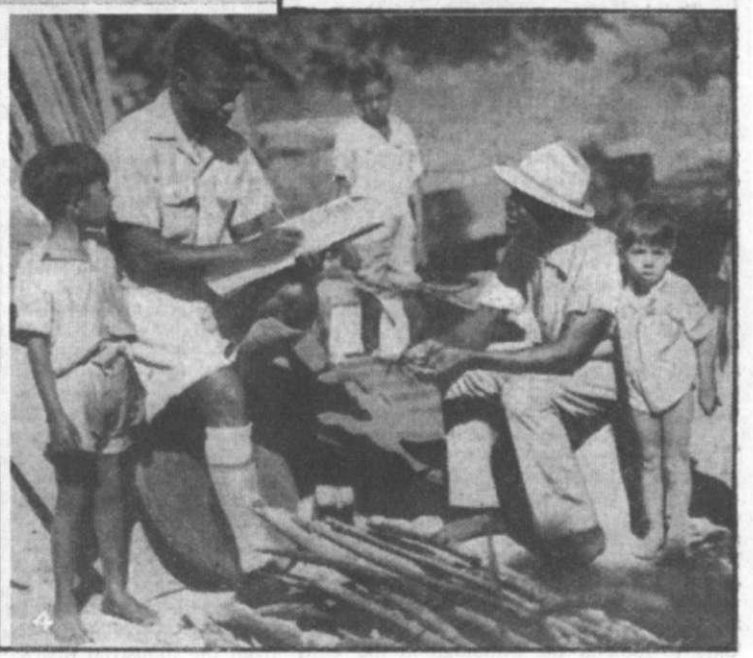
Britain's Colonies in the War: No. 3—W. Indies



UNDER Democratic Constitution offered to Jamaica by the British Government in Feb. 1943, and which it was announced was accepted by the people on May 19, 1943, for the first time in history they will be able to have a decisive say in the government of their island: the new constitution comes into effect in 1944. The part played by the West Indies in the Allied war effort has been immense.

In addition to the supply of skilled men for the Armed Forces, many technicians have been sent to Britain to work in our factories; hundreds more are serving in the Merchant Navy and in their own local Merchant Marine forces. When Britain's need for timber for war purposes was most great, British Honduras sent a forestry unit, consisting of expert loggers, to help fell and prepare the trees. Trinidad, now the largest oil producing centre in the British Empire, has provided considerable quantities for the Allied use. The chief mineral which the W. Indies produce is bauxite, essential in the manufacture of aluminium.

In an effort to be self-supporting, the W. Indies are using derelict sugar plantations in an intensive cultivation of foodstuffs, most of which were imported before the war. Recently the first food yeast factory to be constructed in the world was set up in Jamaica. Sugar and fruit are the main exports, Canada and America now being the chief recipients. Another recent development is the dehydration of fruits on a considerable scale.



TAKING A CENSUS in Jamaica (4), which will form the basis for the first election under the Colony's new democratic constitution. The W. Indian islands of St. Christopher and Nevis (of the Leeward Group) purchased these mobile canteens (1) and presented them to the people of Liverpool. Glad to be in uniform are these Jamaican girls (2) who formed the first A.T.S. unit to be founded in Jamaica in 1943. Good friends with the squadron mascot is this W. Indian Flight Sergeant (3), pilot of a Spitfire: he hails from Trinidad.

Photos, British Official; Pictorial Press

Will Rail Transport in Germany Stand the Strain?

Speedy movement of enemy troops and materials to oppose the coming attack on Europe from the west will depend largely upon the capabilities of the German railways. These, seriously overstrained, are presenting Hitler with problems of the first magnitude. The position is outlined by Dr. ERNEST WERTH to whose article in p. 430 reference should also be made.

Too little consideration has been given in this country to the significance of an order issued to the German railways a short while ago. Similar measures had been taken in the autumn of 1942, when the German traffic system became so overstrained that it was unable to cope with the demands of war transport. Then, as now, it was decreed that railway trucks and wagons should be overloaded by 25 per cent above their normal capacity.

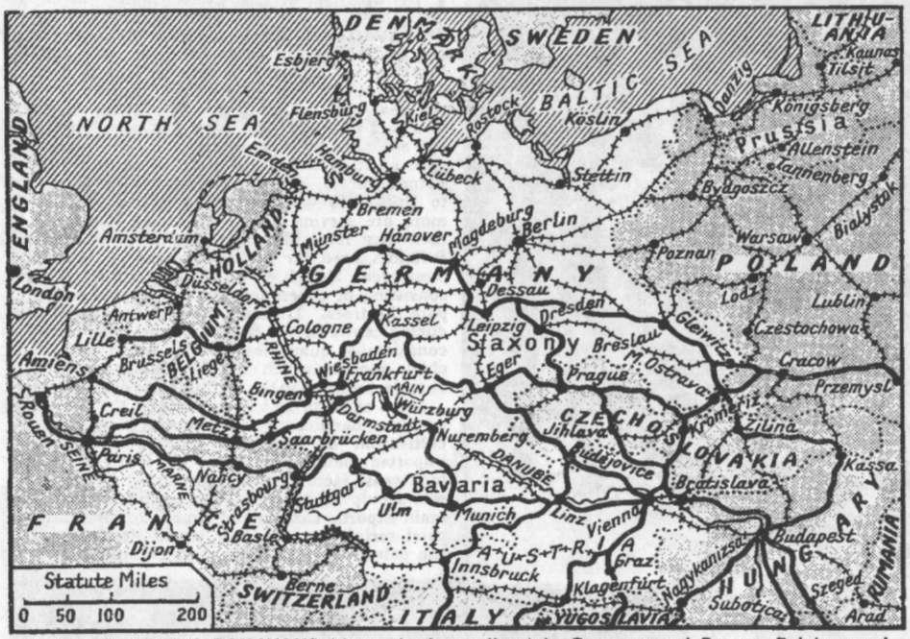
But so many breakdowns and accidents occurred in consequence that a few months later the average speed of goods trains had to be reduced by about 30 per cent, thus again lowering the general capacity of transport to about 87 per cent of normal. Later on this practice had to be abandoned, because the number of broken axles, springs, and so on exceeded the possibility of repairs.

The fact that the Nazi dictator of transport, General Adolf von Schell, has once more to fall back on methods already proved to be dangerous, at a time when Germany is facing an invasion from the west, shows that her much advertised advantage of the "inner line of communication" may become jeopardized. Today this inner line is a problem of railways. Since 1933, when Hitler seized power, he has ignored all the warnings of experts and grossly neglected the railways. Necessary repairs to the permanent way, and replacement of rolling stock could not take place because the Fuehrer was hypnotized by his beloved "autobahnen."

At this crucial moment, when the Second Front is about to materialize, the speedy movement of troops and material—depending upon the efficiency of the railways—may become decisive. The situation is quite different from the position in the 1914-1918 war. It is true that the Germans lost the Battle of the Marne because two Army Corps, urgently needed on their right flank in France, were then on transport to Eastern Prussia; where, by the way, they arrived too late for Tannenberg. But later on, from 1917 onwards the war in the east was practically over, and German traffic was concentrated to the west and only in a minor degree to the south and south-east. Now the war of two fronts—nightmare of all German strategists—starts at a time when the principal means of movement (railways) is already in a state of advanced deterioration.

Contrary to British tradition, the railways in Germany were always the property, and under the management, of the State. There were before 1918 the Royal Prussian, the Royal Bavarian, Saxonian, and other lines, and even after their amalgamation into one huge undertaking the so-called private company was in fact under complete State control. Consequently, military influences and strategic considerations were dominant. It is significant that the military authorities, apprehending destruction of power stations, objected to electrification, although electric power from mountain rivers, artificial lakes and canalized rivers was cheap and abundant.

Of about 36,500 miles of German track only about 1,000 miles, mostly in Bavaria and Central Germany, were electrified. Moreover, lines were constructed for purely military purposes, such as that laid before the 1914-1918 war from the military and industrial centre of Berlin via Dessau to the west and nicknamed "Kanonenbahn" or "cannon track." Between the wars, for the same reasons, a double railroad was constructed from the industrial district of Frankfurt on Main to Saarbrücken, with a huge bridge across the Rhine near Bingen.



VITAL STRATEGIC RAILWAYS (shown by heavy lines) in Germany and France, Belgium and Austria, Czechoslovakia and Poland, and in part of Italy and of Yugoslavia, are now a matter of anxious concern to Hitler, who, as explained in this page, has neglected Germany's rail transport system in favour of his now almost useless motor highways. *Specially drawn for* THE WAR ILLUSTRATED

These costly highways for motor traffic have become almost useless for the Nazi war effort; petrol and tires being so scarce that motor trucks and lorries, even for military purposes, have nearly vanished in Nazi-occupied Europe. For the movements of troops and the transport of reinforcements now the railways play a more important role than at any time during the war. One has only to look at the campaign in the east, where the conquest of railway junctions and the cutting of railway lines compels the Germans to give up one position after another.

With a second front in the west, the task of military transport will be to cover distances of roughly 1,000 miles from the east to France, and 600 and more miles from Germany to Italy and the south-east. The difference from the situation in 1918 is evident; there must be a constant stream of traffic not only east-west and vice versa but north-south; and therefore great junctions and crossings like Cologne, Frankfurt, Stuttgart, Nuremberg, Leipzig, Hanover and Berlin have been constant targets for Bomber Command. Here indeed are most sensitive joints, even the temporary paralysis of which must involve grave traffic jams and hold-ups.

The German railways entered this war with a personnel of more than one million and a stock of about 35,000 locomotives, 70,000 coaches and about 75,000 trucks and wagons. The occupation of Austria and Czechoslovakia added another 13,000 miles of railways, and since then the stocks of nearly all European countries have been plundered for German military purposes. Entire lines, including the permanent way, the signal system, etc., in western countries have been dismantled and transported to the east, where the wider Russian gauge had to be changed over to the German standard.

But notwithstanding all efforts, the severe winter of 1941-1942 saw a great disaster for the German Army, mainly because the railway traffic suffered a complete breakdown. It appeared that the Central-European locomotives were entirely unsuitable for the Russian climate. Thousands of locomotives became frozen, their boilers and pipes burst beyond repair, and long rows of rolling stock, fit only to be scrapped, crowded the sidings of Poland. In this emergency German engineers hurriedly designed a so-called "utility locomotive," known as the K 42, which was to be not only cheaper and simpler for mass production, but at the same time more efficient and, in particular, "winter-proof." It is, however, known that the average monthly production of that model never exceeded 200, whilst occasionally the bag of R.A.F. "locomotive-busters" in the west reached 250 machines and more. In addition to the K 42, it has lately been announced that a special goods train utility locomotive, the K 44, has been designed and will be in mass production at the well-known Orenstein and Koppel works at Berlin.

If one takes into consideration the damage that great locomotive works like the Henschel factory at Kassel, the State works in Hanover, and the famous firms Borsig and Schwartzkopf at Berlin, must have suffered in air raids, one can estimate Hitler's railway problem in the spring of 1944.

For him everything now depends on a frictionless flow of traffic. The transport of one division today requires about 60 trains, its constant reinforcements many more. A glance at the map shows that all this traffic is, in the end, confined to some 8 to 10 trunk lines in each direction. And here, particularly in the west, a special danger point arises: of some 25 bridges crossing the Rhine, about 12 are main railway bridges.

In 1944 during and after invasion from the west, the combined Allied air forces may well be able to keep those bridges, and the railways and marshalling yards around them, under constant assault. No Atlantic Wall no newly constructed Dutch Wall or Siegfried Line, could be held with supplies from the rear interrupted by the cutting off of their life-lines. We may see in the west, as in the east, a battle for railways and communications.

Fighting Senegalese get their Share of Jeeps

STREAMS OF WAR MATERIALS for the Allies include these rows of jeeps just arrived at Casablanca, North Africa, where Senegalese troops assemble them ready for the road. Fierce warriors from French West Africa, Senegalese took part in the victorious march by Gen. Leclerc's Fighting French troops from Chad Territory in French Equatorial Africa, against Italian positions in Libya more than a 1,000 miles distant, which coincided with Gen. Montgomery's drive into Tripolitania from the east. See Vol 6, p. 526.

Photo, Keystone

China Recaptures Burned Rice-Town of Changteh

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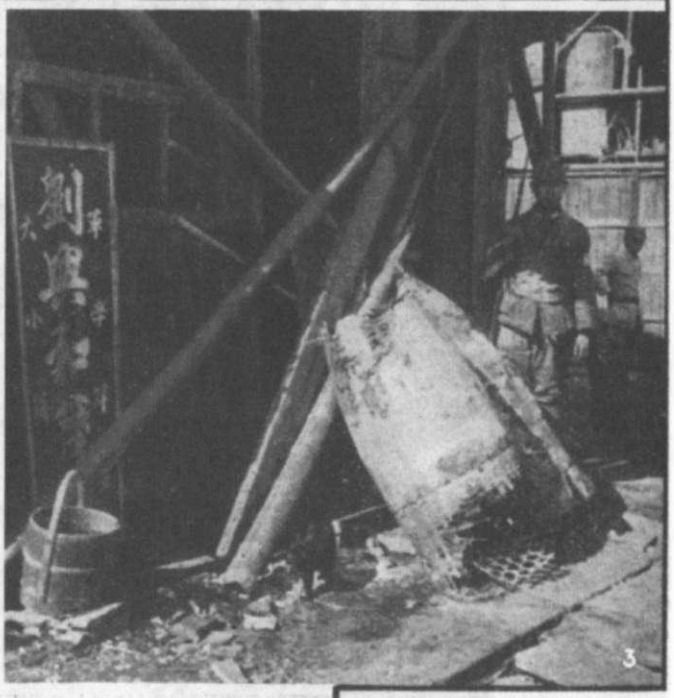
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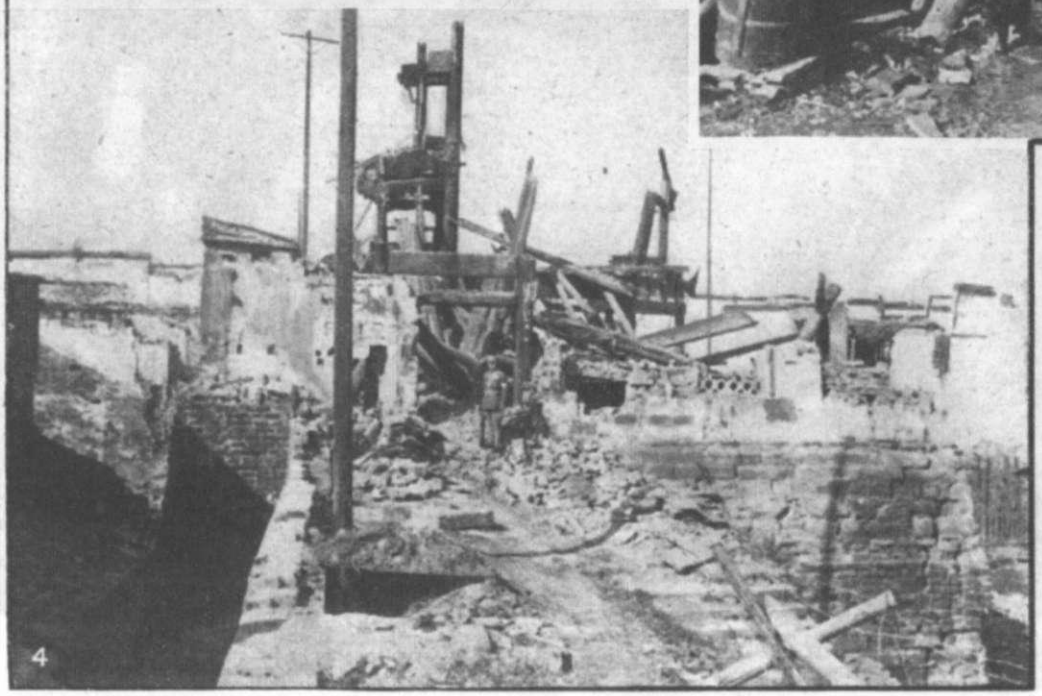
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IMPORTANT RICE CENTRE, Changteh, in the Tungting lake area, was taken by overwhelming Japanese forces on November 25, 1943, after a 15-day siege in which the Chinese garrison fought magnificently. The enemy did not hold the city for long, however. On December 9 Chinese forces recaptured it.

During the fight the city was largely reduced to ashes, as is shown by the remnants of one of the towers (4), where a small band of Chinese, under intensive artillery fire, battled on until ammunition and food were exhausted. Allied aircraft dropped supplies for the heroic defenders, in containers made of plaster and bamboo (3). Sullen and resentful are these untidy Japanese prisoners (2); the Japanese took no prisoners. After the recapture of the city the people return home, a Chinese soldier (1) carrying in a cradle slung from his shoulder an orphaned baby he has found by the wayside.

Photos, Topical Press

I WAS THERE! Eye Witness Stories of the War

They Posted Me 'Missing' When Sahib was Sunk

Chief P/O F. R. Flack, coxswain of the submarine Sahib and one of the survivors after her sinking in the Central Mediterranean—and posted as "missing" until he was heard over the German radio telling his wife and mother and father that he was safe—tells in this Evening Standard story of the strange and adventurous journey that led him recently to Buckingham Palace, to receive the D.S.M. at the hand of the King.

SAHIB, as you know, was sunk. Exactly how she was sunk I cannot tell you, but at the end of the first lap of my journey I found myself swimming about in the Mediterranean with all the rest of the crew of the Sahib.

While we were doing that, the enemy came over and machine-gunned us from the air. One of my shipmates was killed. Eventually we were picked up by some destroyers. We were split into parties, and with Lieutenant J. H. Bromage, who was in command of the Sahib, the other officers and 10 ratings, I arrived at Camp 70, near Ancona.

We were there when the Italian collapse came. We were told to remain in camp and see what happened. After a couple of days 500 Germans turned up there, and some of the British naval personnel decided that it was time to leave.

I got out with Petty-Officer Boatman, of Saffron Walden, Artificer Winrow, of Liverpool, and Corporal Bode, of the R.A.S.C., whose home is at Walthamstow. For a week we managed to feed ourselves. Then we had to seek some help, so one would risk going to a farmhouse while the others watched to see what sort of reception he got. The Italians nearly always helped us.

After 23 days we slipped through the German lines and walked into a British sentry. He took us along to have the finest cup of tea I have ever tasted. The next lap of the journey was back to the base from which the Sahib had sailed. I went round and called on my brother. He had a bit of a shock !

Then Flack came home and with two other Frederick Flacks—his father and young son—and his wife and mother he went to receive his decoration.

Chief P/O F. R. FLACK, of H.M. submarine Sahib, whose D.S.M. is admired by his young son immediately after the investiture. See story on the left. *Photo, Evening Standard*

Along Ledo Road to the Northern Burma Front

Ceaselessly men toil and sweat to keep the Ledo lifeline open. Through jungle, which was the home of tigers, leopards, black panthers and elephants, bulldozers now gouge their shattering way. Philip Wynter, Australian Consolidated Press, tells the romantic story of this great battle-track.

I HAVE just come over the Ledo Road after some days of rain, and the men on the road were fighting a 24-hour battle to keep the road open and move the convoys through. In the spectacle of the Ledo Road to the Northern Burma front, and the people on it, you find its meaning. A road sign says: "This is your lifeline. Treat it right." Other signs are in English and Chinese characters. The military "traffic cops" are either American or Chinese.

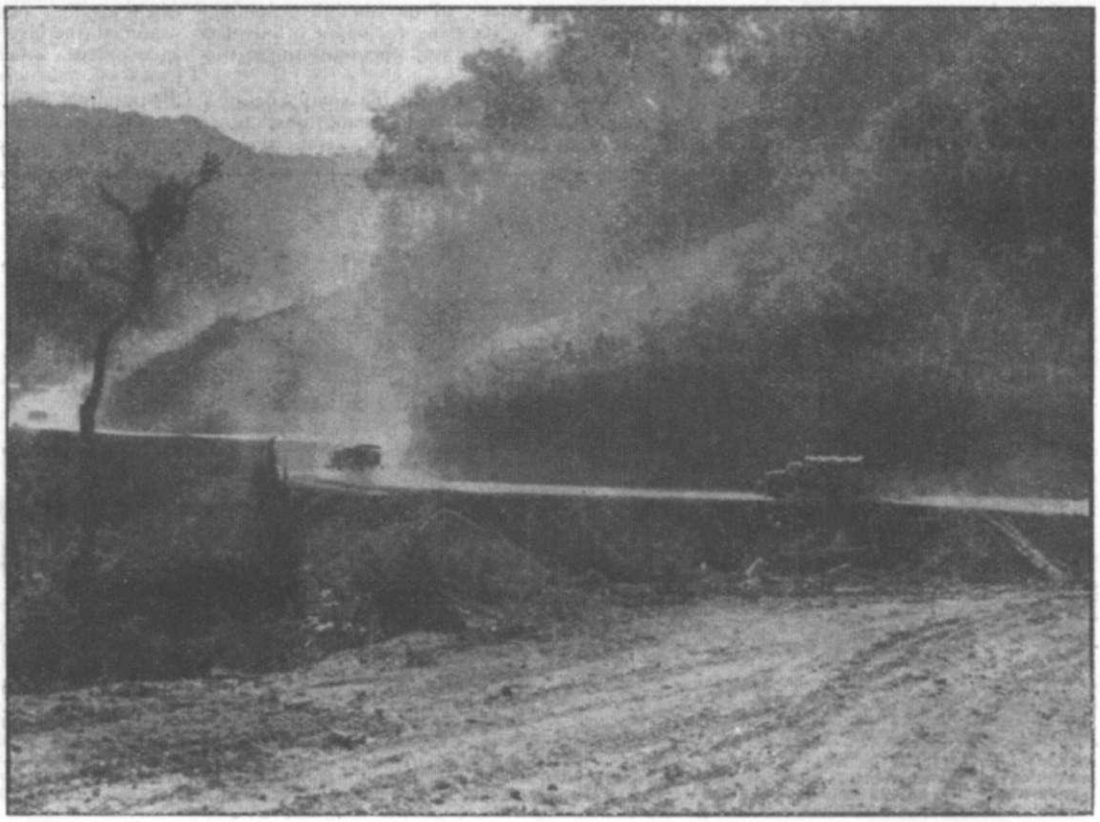
On the road you meet Chinese soldiers going to the front, Chinese driving trucks and jeeps, American negroes driving trucks and bulldozers. You meet American engineers planning, directing and measuring; Indian soldiers heaving crowbars; hillmen from the Himalayas cutting the jungle, building camps, and local head-hunting tribesmen passing by indifferently.

You climb over the steep ranges of Northern Burma—above the clouds and into dark valleys. You pass through jungle so thick that sunlight falls only on the pathway cleared for the road, and under the roadside wall of trees, vines, ferns and palms the ground is dark like a cave. This was the home of tigers, leopards, black panthers and elephants until the clatter of bulldozers and the smell of men drove them to quieter haunts.

This was the old opium-smuggling route from China to India, and a rough track, known locally as "Marco Polo Trail," touches the new Ledo Road at many points. Along this track lie bones and skulls of thousands whom starvation and plague killed as they fled from Japanese columns in Burma two years ago.

Today the great impulses "Keep the road open," "Keep it moving forward," and "Send the supplies through," knit into one pattern the jungle, the ranges, the road and the lives of people on it. This means constant combat with the terrain, jungle, rain, mud, landslides, malaria, miteborne typhus, leeches, millions of jungle insects and heat.

And the road can be measured against the sweat and lives of the men working through daylight hours and by oil flares at night to carve a road into new country, widen and make its surface passable, to repair rain and traffic damage. For 14 months since the road first began to move from the Assam Province of North-eastern India into Northern Burma, men have done this. At the same time they kept flowing forward long columns



WINDING THEIR WAY along the Ledo Road are these U.S. Army supply trucks, in the rear of engineers who are building the road and troops who are clearing the way of Japanese. American-trained Chinese soldiers are under Lieut. Gen. J. Stilwell, commander of the U.S. Armies in Burma, India and China. See story above, and map in p. 556.
Photo, Planet News

WIVES AND MOTHERS OF NATIVE LABOURERS take head-balanced baskets of fruit and other food to their menfolk toiling on the Ledo Road which, under the supervision of U.S. engineers, is being pushed ahead in Northern Burma despite incredible difficulties. American negros, Indian soldiers and hillmen from the Himalayas are helping in the work of constructing this new life-line to China, as the accompanying story relates. See also photograph in the previous page.
Photo, Keystone

of trucks with food, ammunition, medical supplies, petrol, engineering equipment and spare parts for the colonies of men working on the road.

All the time Chinese troops have operated in front of the jungle cutters and bulldozers at the moving roadhead. Today, reaching more than 100 miles across the frontier ranges, Ledo Road is moving deeper into Northern Burma in Hukwang Valley. It is common knowledge that the supreme aim of the road is connexion with the old Burma Road, supply route to China, when clearance of the Japanese makes it possible.

I Went to Battle in a Tank in England

Taking part in one of the biggest invasion exercises carried out by an American armoured unit, Philip Grune, Evening Standard reporter with U.S. Forces, gives his impressions of "battle" fought with near-realism over a great area of the English countryside.

GID CARTER, from Tennessee, sat quietly at the controls of an M-4 Sherman tank, his eyes to the periscope, reacting instantaneously to the inter-com orders of his commander. He looked like an automaton as he pulled one lever, then another, as the tank swung to the right or left, accelerated or stopped dead.

As I sat beside him in the second driver's seat, I knew that Gid and his pals in this iron battlewagon—Corporal Marvin Peterson, of Virginia, the gunner, and Private "Pearly" Allen Bailey, of Virginia, assistant gunner and radio operator had been trained as thoroughly as any Flying Fortress crew. For a day I was one of the crew of this Sherman, commanded by Sergeant Lorrain Duco, of Illinois, taking part in one of the biggest invasion exercises carried out by one of America's armoured units. The rolling English countryside had been turned into a great battle area; all day the hills resounded to the roar of big guns, the whine of howitzer and mortar shells, and the shattering clatter of machine-guns.

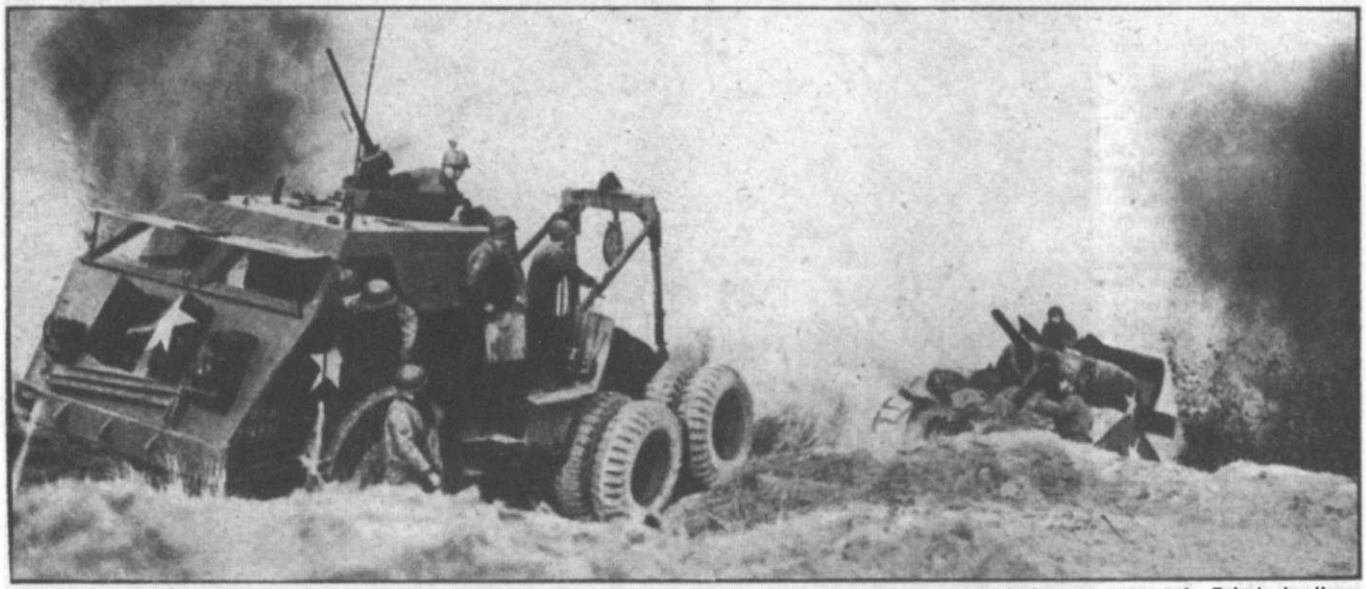
When I climbed into the small cockpit I was told: "Once you are buttoned down you cannot get out until the exercise is over; it'll be dangerous." And what I saw through the 3-in. periscope convinced me that the officer briefing us was right. The vast area in front of us was as dangerous as no man's land in the real battle zones.

Patterned with Bursting Shells

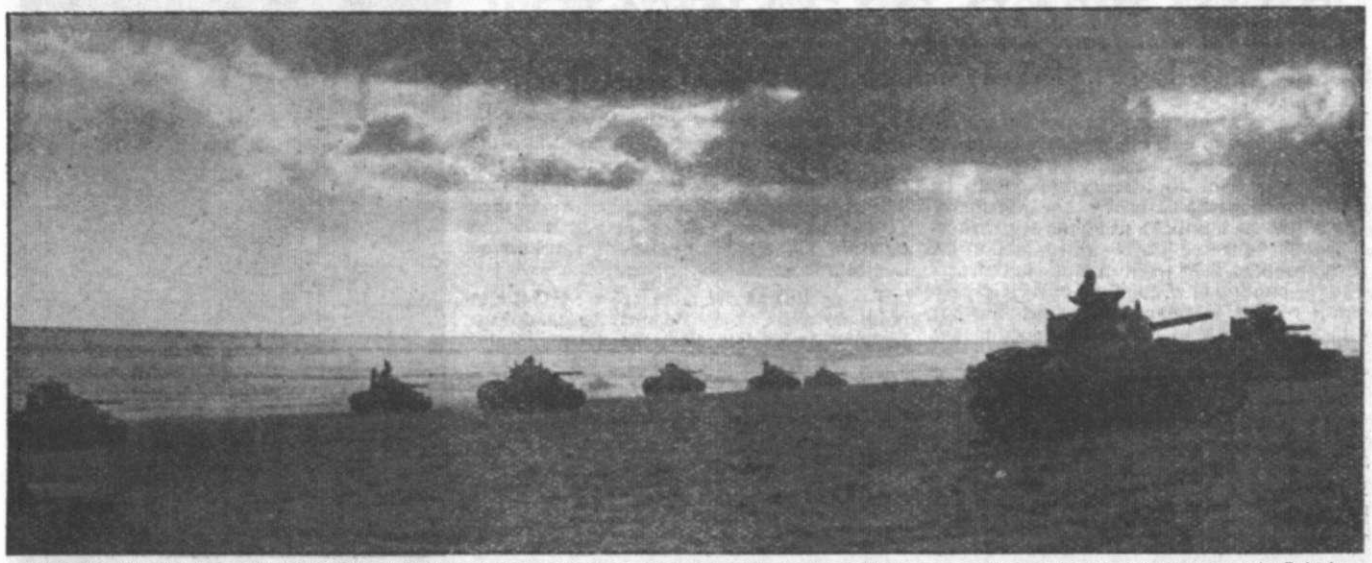
The plan was to capture a position which the "enemy" had occupied during the night. It was not known how strongly the position was held, but the reconnaissance unit had reported that the enemy had established themselves in a clump of trees behind a hill some four miles away. Our job was to knock out the position before reinforcements could be brought up. In our tank we waited for orders to "take off," just as bombers wait for the word from the control tower to speed along the runway.

First the 105-mm. howitzers opened the attack. I could hear the whine of the great shells as they passed over our column, and watched the live ammunition burst on the escarpment where the enemy were entrenched. The whole area was patterned with the bursting shells.

This bombardment went on for half an hour; then we got orders to move forward.



GIANT RESCUER OF DISABLED TANKS or other heavy Army vehicles is the American M.25, seen here during manoeuvres in Britain hauling a tank out of a bomb crater, while actual explosions simulate real war conditions. This tank recovery vehicle, completely enclosed in armour, has a crew of 7 highly skilled technicians; it can carry up to 40 tons at a speed of 28 m.p.h. and is armed against attack. It is equipped with comprehensive repair equipment, and can move through water.
Photo, U.S. Official



GETTING READY FOR THE SECOND FRONT are these American Sherman tanks during realistic battle rehearsal in a vast training area in Britain. Just after the photograph was taken the tanks went into a live ammunition fight. The Sherman carries a crew of seven, has a cruising range of 150 miles, and is armed with a 75-mm. gun; later versions have a 90-mm. gun and four machine-guns. See accompanying story. *Photo, Topical*

With our 75-mm. blazing and machine-guns cracking we took our position with scores of tanks pounding down on the target. I was fascinated by the tracers from our machine-guns as we weaved and turned through the downs in violent evasive action, and forgot to take notice of Sergeant Duco's order to let go the 75.

The recoil nearly broke my neck, but these boys in the tank just went straight ahead and banged away at the ridge, now quickly approaching. The shells from the howitzers and mortars still screamed overhead. Then came our order to stop. The big column, like a battle fleet at sea, lined up in position ready to advance to the next enemy stronghold, as the infantry streamed through, under cover of a smoke screen.

The results of the exercise showed that the tank guns, as well as the big fellows, had got the enemy position. The commanding general said that no quickly established enemy position could have held out against such accurate and heavy shelling. But if the reconnaissance had been inaccurate and the position was strongly held and fortified, we had reserves behind us—another great column of tanks which could have gone in behind us.

Sergeant Duco, who has seen action in Sicily and is now one of the instructors, said that the battle was as realistic as he had seen. He lost his tank in Sicily—knocked out by a 90-mm. shell—but he got away with a few burns. Now he and the rest of the men in this armoured unit are waiting for the time when they will roll into Europe.

Until then they will be on daily manoeuvres, and beyond the red flag perched behind the thatched farmhouse, denoting "danger zone," the once peaceful country will remain a battle area. Some of the instructors of this armoured unit have been in action against the enemy. The rest are getting their first smell of powder and, with the live shells flying about, learning the hard way how to keep out of trouble when at last they encounter real conflict beyond our shores.

OUR DIARY OF THE WAR

FEBRUARY 16, Wednesday *1,623th day*

Italy.—Germans launched heavy attack in northern area of Anzio beach-head. Total British casualties from Sept. 3, 1943-Feb. 12, 1944, announced as 36,625, including 7,635 dead.

Russian Front.—Zapolye, S. of Luga, taken by Russians. Helsinki heavily bombed by Red Air Force.

Burma.—Japanese troops captured the Ngakyedyauk Pass, and isolated the 7th Indian Division.

Pacific.—Truk, great Japanese naval base in the Caroline Islands, attacked by powerful U.S. naval task force.

FEBRUARY 17, Thursday *1,629th day*

Russian Front.—Liquidation of 8th German Army trapped in Korsun pocket of Dnieper Bend completed.

Pacific.—Two-day American assault on Truk (Caroline Islands) ended; 201 Japanese aircraft and 23 ships destroyed by air and naval attack.

Air.—Revealed that 9th U.S. Air Force under Mai.-Gen. L. H. Brereton had arrived in Britain.

Sea.—Announced that U.S. troopship recently sunk in European waters with loss of 1,000 men.

FEBRUARY 18, Friday *1,630th day*

Russian Front.—Staraya Russa and Shimsk, German bastions in Lake Ilmen region, captured by Soviet troops.

Home Front.—Germans made biggest attempt since 1940-41 to fire London.

FEBRUARY 19, Saturday *1,631st day*

Italy.—German counter-offensive on Anzio continued.

Russian Front.—Plyussa, 55 m. N.E. of Pskov, taken by Russians.

Burma.—Enemy defences W. of the Mayu peninsula raided by British troops.

Australasia.—12 merchantmen and three warships sunk in Japanese convoy N.W. of New Ireland, in attack continuous since Feb. 15.

Air.—Leipzig (2,300 tons dropped) bombed. Berlin raided by Mosquitoes.

FEBRUARY 20, Sunday *1,632nd day*

Italy.—Revealed Indian and New Zealand troops fighting in Cassino battle.

Home Front.—Many incendiaries and H.E. bombs dropped in London raid.

Air.—Leipzig, Brunswick, Gotha, Halberstadt and Bernberg aircraft factories, Gutow and Oschersleben military installations, attacked by 2,000 Allied aircraft. Marauders of 9th U.S.A.A.F. in action for first time since their arrival in Britain.

FEBRUARY 21, Monday *1,633rd day*

Burma.—Fifth Indian Division cleared Japanese from commanding positions.

Pacific.—Japanese bombed U.S. naval task force moving to attack Tinian and Saipan Islands in the Marianas.

Air.—Brunswick and Hanover aircraft factories, Bramsche, Lingen, Vechte, Quakenbruck, Diepholz and Ahlhorn airfields, bombed.

FEBRUARY 22, Tuesday *1,634th day*

Russian Front.—Krivoi Rog captured by troops of the 3rd Ukrainian Front. Morino and Mihailovsky taken.

Home Front.—German bombers attacking London met by great anti-aircraft barrage, described as "heaviest yet."

Pacific.—Conquest of Eniwetok atoll (Marshall Islands) completed by capture of Parry Island. Task force of U.S. Pacific Fleet attacked Tinian and Saipan Islands.

Air.—Regensburg, Bernberg, Aschersleben and Halberstadt raided in co-ordinated blow from Britain and Italy.

FEBRUARY 23, Wednesday *1,635th day*

Mediterranean.—Announced that Marshal Tito's Yugoslav partisans had reached the Skoplie-Nish railway line.

Home Front.—London bombed for fourth night in succession.

Air.—Steyr aircraft works, 95 m. W. of Vienna, attacked by Liberators.

FEBRUARY 24, Thursday *1,636th day*

Russian Front.—Dno junction, on route to Pskov, captured by troops of the 2nd Baltic Front. Rogachev taken by troops of the 1st White Russian Front.

Home Front.—Many high explosives and fire-bombs dropped on London.

Burma.—Ngakyedyauk Pass cleared of the Japanese.

Australasia.—Announced that all western New Britain in American hands.

Air.—Schweinfurt ball-bearing works and Gotha aircraft assembly plant attacked from Britain, Steyr (Austria) air components factory by Fortresses from Italy.

FEBRUARY 25, Friday *1,637th day*

Russian Front.—Germans announced evacuation of Vitebsk.

Air.—Regensburg, Stuttgart, Augsburg, and Furth aircraft works raided in two-way blow from Italy and Britain. Augsburg (1,700 tons dropped) twice attacked at night.

FEBRUARY 26, Saturday *1,638th day*

Mediterranean.—Revealed that Capt. Randolph Churchill, the Premier's son, recently landed by parachute in partisan-controlled Yugoslavia.

Russian Front.—Russians freed great trunk railway from Leningrad to Nevel on a 300-mile front by capture of Porkhov, 15 m. N. of Pskov.

Air.—Estimated German fighter output cut by 60 per cent, bomber output by 25 per cent, as result of last week of bombing.

FEBRUARY 27, Sunday *1,639th day*

Russian Front.—Bezhakitsy, W. of Kholm, Zabelye and Putoshka, in Novo-Sokolniki region, taken by Red Army.

FEBRUARY 28, Monday *1,640th day*

Italy.—Announced that two strong-points in Anzio area captured by British troops of 5th Army.

Russian Front.—Karamyshevo, Sladkovichi, Pozherevichi, Toroshino, and Veshki, in the Pskov area, liberated.

FEBRUARY 29, Tuesday *1,641st day*

Italy.—German heavy guns on perimeter of Anzio beach-head opened heaviest bombardment since the first landings.

Pacific.—American forces landed on Los Negros Island, in the Admiralty Is.

Air.—Brunswick raided for third time in ten days by American bombers. Announced formation of Air Defence of Great Britain, under Air Marshal Sir R. M. Hill, K.C.B., M.C., A.F.C. to replace Fighter Command.

General.—Soviet armistice terms to Finland announced. Relations with Germany to be severed and all German forces interned; re-establishment of Soviet-Finnish Treaty of 1940; repatriation of Soviet and Allied prisoners and civilians; demobilization of Finnish Army, reparations, and the future of Petsamo to be discussed in Moscow.

★ Flash-backs ★

1940

February 17. *Russians forced Finns to withdraw in the Karelian Isthmus, N. of Leningrad.*

February 22. *Islands in Gulf of Finland occupied by Russians.*

1941

February 17. *Imperial troops crossed Juba River (Italian Somaliland) at Tonte, N. of Gobwen.*

February 18. *Large Australian forces arrived at Singapore.*

February 25. *Mogadishu, capital of Italian Somaliland, captured by East and West African troops.*

1942

February 16. *Formation of 10th Army in Persia and Iraq announced.*

February 23. *Dorogobuzh, on the Dnieper, 45 m. east of Smolensk, captured by Soviet troops.*

1943

February 16. *Kharkov, gateway to the Ukraine, taken by Red Army.*

February 17. *Medenine (Tunisia) occupied by Gen. Montgomery's men of the 8th Army.*

February 22. *Myebon, S. of Akyab on Arakan coastline, raided by Allied troops based on India.*

THE WAR IN THE AIR

by Capt. Norman Macmillan, M.C., A.F.C.

THE air war continues to rise to greater intensity in every theatre of war, except perhaps the Russian, where an almost steady volume of air activity appears to be maintained, particularly by the Germans, who withdraw bomber and fighter formations of the hard-pressed Luftwaffe for action on other fronts as their front in Russia contracts with the continued withdrawal of the German armies. The Germans can effect this air withdrawal without unduly reducing the proportion of their armies' air support per hundred miles of front, not only because of contraction of the defensive line but because of the shortening of lines of communication.

Length of communication lines affects air power just as it affects land and sea power. The aircraft are assembled in factories far removed from the fighting front. From these factories they have to be flown to pools, although the markings on some recently captured German aircraft have indicated that many of their machines have been flown direct from factory to first-line airfield, due to shortage of supplies relative to the demands of the fighting forces.

It must be remembered, however, that shortage of aircraft supplies is sometimes a temporary deficiency brought about by changes of production from one type of aircraft to another, or by the introduction of modifications, such as changes in engine or armament or equipment, all of which must occur from time to time to keep pace with technical developments. And it may be that these particular captured aircraft indicate simply the natural desire of the German generals to get the latest types into action without delay, while maintaining a reserve of earlier types in the pool.

This, indeed, was the method adopted by Fighter Command of the R.A.F. during the Battle of Britain, and the reserve aircraft when brought out during the closing stages of that battle were less well armoured than those that fought in the opening stages. Such occurrences are almost inevitable during defensive fighting, when generals are often forced to play their best cards first to take the attack of their more powerful opponents, with the hope that by doing so they will be able to produce a more favourable balance.

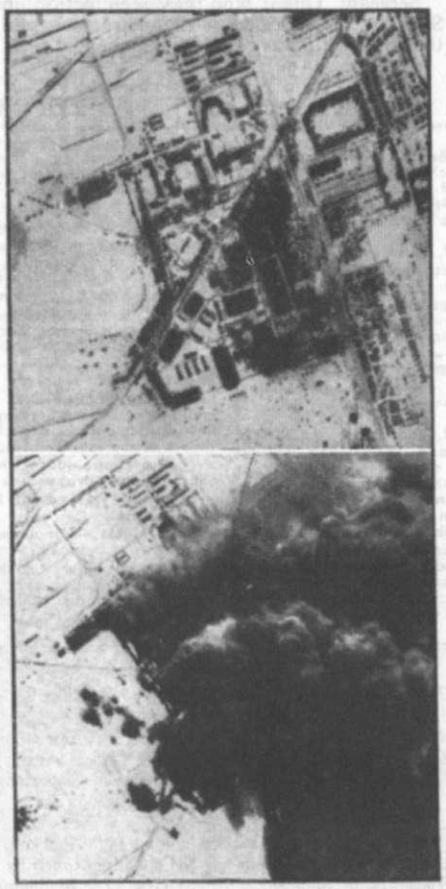
MARSHAL STALIN proclaimed in a recent Order of the Day that the Red Armies have driven back the enemy 1,000 miles. That means to the Luftwaffe 1,000 miles shorter journey to transport their bombs, fuel, lubricating oil, spares, and technical stores; and it simultaneously knocks the same distance off the journey which the aircraft ferried from factory or pool to front have to fly. All this means a saving in time and personnel, and a saving in aircraft, too, for it is known that numerous German aircraft crashed during ferry flights to the eastern front and thus were lost before they ever got into action.

It is almost certainly this combination of savings that has made it possible for the Luftwaffe to transfer not inconsiderable forces of bombers to Western Europe. Probably the main object behind this transfer was the urgency to get bomber aircraft into position to meet the threat of invasion. The German generals know now from experience gained by them in Sicily and Italy—at Salerno and Anzio—that the critical moment of any amphibious attack is when the assault forces first come in. Then the assault forces' organization to resist counter-attack is at its lowest, and must so continue until sufficient troops can be got ashore to establish positions, get guns into action, seize enough ground for armoured fighting vehicles and fighter aircraft to deploy, and land all the paraphernalia of modern war, disperse it and get it into the fighting lines. Quick as the Germans are at moving aircraft from one front to another it is possible that the Nazi generals feel they dare not take the risk of waiting until the invasion assault begins before transferring bombers from the east to the west.

Taking this as the most probable German point of view, it is possible to read into Stalin's declaration that the enemy is still powerful and not yet beaten; consider also the Roosevelt-Churchill warnings that great battles loom ahead, the significance of the German method of retreat and sacrifice of surrounded troops.

WORLD Has Never Seen a Bigger Defensive Action of its Kind

Germany is fighting a desperate defensive action on land, at sea, and in the air. It is the biggest action of its kind the world has ever seen. And it is being fought with skill and tenacity that display the clever marshalling of forces and the as yet unbroken will to fight of the German soldier. The fact that the present first-line strength of the Luftwaffe is about 1,000 aircraft greater than at the beginning of the war is said to be due to the increased production of fighters compared to bombers. This is reasonable, for the weight of material and the number of man-hours required for fighter production is far below that demanded for bomber production. And as the former ratio of the Luftwaffe was around 65 per cent bombers and 25 per cent fighters (the remainder being marine and army co-operation and other types) there was ample opportunity to switch production priorities from one to the other; but the stress is apparent—fighters for defence. At one time we had to do the same.



BEFORE THE ALLIED BOMBING the Messerschmitt fighter plane plant at Gotha, north Germany, looked like this (top). When U.S.A.A.F. Liberator aircraft left it after their attack on Feb. 25, 1944, it was just another funeral pyre of Nazi hopes (below). *Photos, U.S. Official*

ROCKET BURSTS IN THE NIGHT SKY over London had devastating effect during recent raids on the capital. Latest British A.A. weapon, the rocket gun, whose shells, or projectiles, rush into the sky with terrific noise, is the result of five years' patient secret research culminating in successful tests in Jamaica, where weather conditions permitted best observation of results. Many Nazi planes have fallen to this rocket gun. *Photo, Keystone*

While the German bombers in the west await zero hour for invasion they are employed in a renewal of the attack on Britain. London is the chief target. The attacks are made by night, for the Luftwaffe still fears the daylight assault on Britain. They have not yet, at any rate, caught up with the quality of American heavy day bombers that can fight back fighters. These interim-invasion attacks on London are a combination of reprisal, exercise, and employment of waiting forces. As the Russian front continues to shorten—the line Memel-Odessa is about 20 per cent shorter than the line Narva-Odessa—it is probable that more bombers will be released for transfer to the west, and that the attacks against Britain will be increased in weight or frequency.

To some extent these attacks on Britain are a result of the Allied policy of bombing fighter factories to clear the skies of fighters for the invasion. And it is one of the penalties that Britain has to pay for being an advanced base. For almost three years we have maintained an unbroken bomber offensive with scant reply from the Luftwaffe, and we have presumably learned more about offensive bombing than about defence against the night bomber. We have multiplied A.A. guns. But multiplied Nazi guns did not stop our bombers from bombing German targets. We need still more scientific night fighter defence. It will come with the need to provide it.

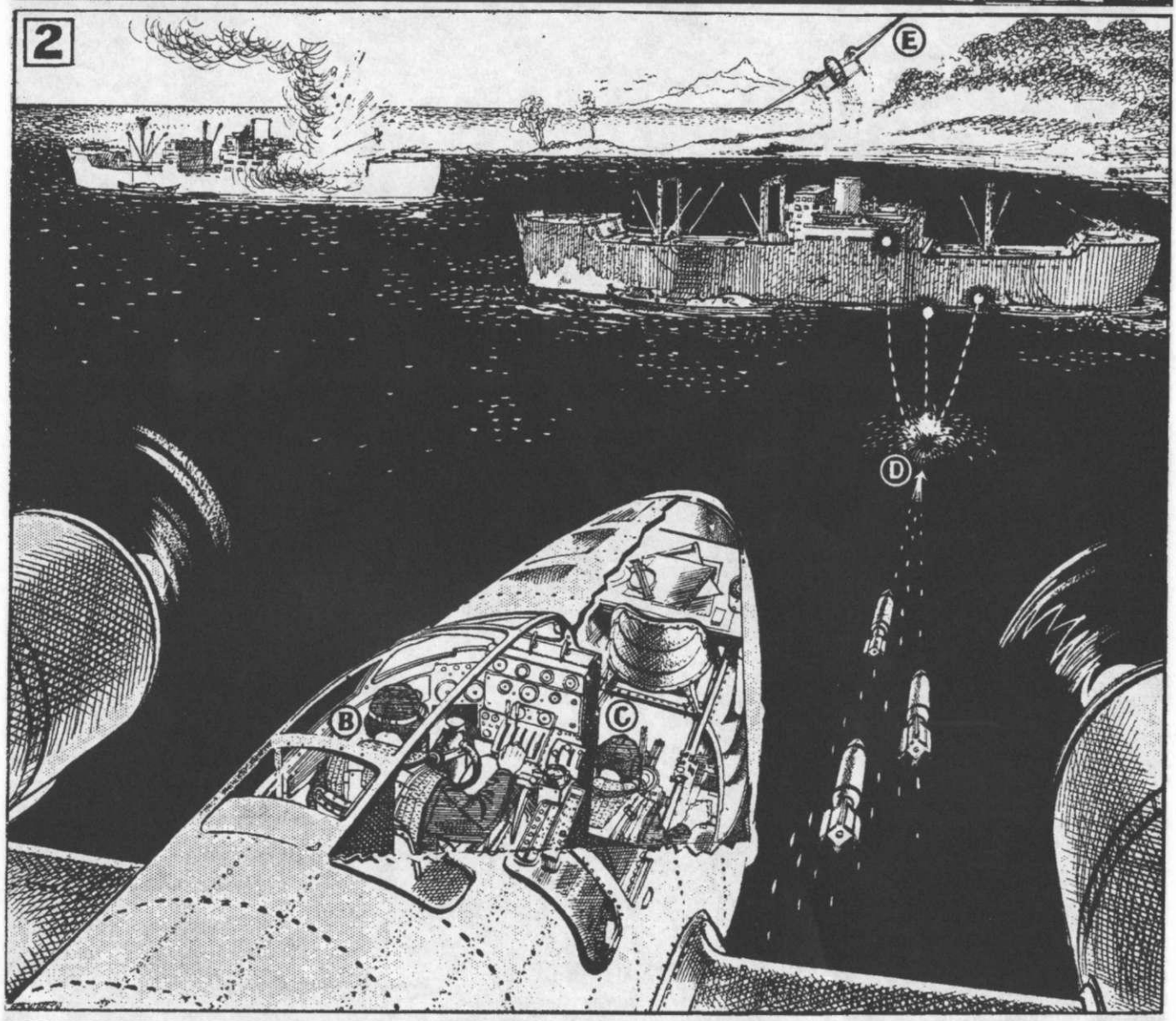
Meanwhile, in the Pacific a U.S. task force has bombed Truk, Japanese naval base in the Carolines. More bombs have fallen on the most northerly Kurile islands, on uncaptured portions of the Marshalls, and on the Marianas. Rabaul has been practically bombed into impotence; the whole New Britain area is dominated by Allied air power. The British night and American day heavy bombers range at will all over west, central and southern Europe. The air offensive never stops.

Allied Bombers in Battle on the Italian Fronts

AIR SUPPORT FOR THE ALLIED BEACH-HEAD south of Rome is strikingly illustrated by these B.25 Mitchell bombers (top) of the 12th U.S.A.A.F. flying low over the Italian countryside against German positions. Besides throwing their weight into beach-head battles, our airmen strike frequently at transport well to the enemy's rear, and hinder the regrouping of troops ; bombs are leaving an R.A.F. Baltimore (below) on the way down to a target on the Rome-Pescara road. Allied air forces have flown as many as 1,600 sorties in one day.

Photos, British and U.S. Official

Daring Skip-Bombers Surprise Japanese Shipping



PURSUING A NEW AIR ATTACK TECHNIQUE, Allied bombers in the South-West Pacific are taking increasing toll of Japanese merchant vessels and warships. The method is known as "skip-bombing," in which the aircraft comes in on its target at a very low altitude—usually about 50 feet—travelling at high speed and releasing its bombs when close to the objective; the bombs travel forward horizontally for a distance before hitting the water just in front of the vessel, then bound or skip up from the surface of the sea against it. The R.A.F. were the first to employ this ingenious plan, against land targets in Northern France, in 1941. The Americans have adopted it, experimented with it for both land and sea attack, and are now finding it successful against Japanese shipping.

In Diagram 1, attacking planes are approaching their objective low above the water, thus presenting difficult targets for enemy fire (A). In Diagram 2, the bomber pilot (B) is aiming his plane at one of the merchant vessels; it is the pilot, judging the crucial moment, not the bomb-aimer (C), who actually releases the bombs. When the appropriate striking distance has been reached, the bombs leave the plane, hit the water's surface a glancing blow (D), then pass on into the hull or super-structure of the vessel. By this time the plane (E) has passed over the ship and is clear of the danger area. Delayed action bombs are sometimes used; these give the attacking plane more time to get away from the target before the dropped bombs explode.

Any type of aircraft may skip-bomb. Flying Fortresses have been known to carry out the manoeuvre successfully; but best for the purpose is a medium bomber, such as the Mitchell or Marauder. Bombs used range in weight up to 1,000 lb. Beyond that weight their shape alters considerably and is not adaptable to the skip-bombing technique; 250-lb. and 500-lb bombs are those most used. In misty or cloudy weather, low-level reconnaissance followed by surprise skip-bombing has proved particularly deadly. The main purpose behind this low-level method of attack is that the vessels present a bigger target than they do from a height; it is, in fact, a combination of dive-bombing and aerial torpedo attack.

Specially drawn for THE WAR ILLUSTRATED *by Haworth*

Editor's Postscript

TRYING to follow the course of operations in this war is far more difficult than it was last time. Then, and in most wars of the past, there was a "front," or, rather, two fronts facing one another. If one were dented or broken through, it meant that the whole of it felt the shock, and very likely had to withdraw—as a whole. With a map, the whole of the fighting could be understood pretty clearly. Now there are no well-defined fronts with no man's land between them. Battles go on all over the place. What have come to be known as "hedgehog" defences stand like separate fortresses, with perhaps only the slenderest of communications with the main body. These are really developments on a mighty scale of our blockhouses in South Africa (1899–1902) and the pillboxes of which so much was heard last time (1914–18), which were blockhouses more strongly fortified. The use of hedgehogs is for defence or for keeping certain territory free of enemy incursions.. Attacking troops have no time for them. That is why we hear of them only on the Nazi side in Russia. We shall find a lot of them when we invade the Continent, but we have our plans for knocking them out.

DID you ever see Somerset Maugham's play Home and Beauty? I have never forgotten the roar of laughter which greeted Sir Charles Hawtrey, one of the dressiest of actors, when he entered as a soldier just demobilized in the most comically ill-fitting suit you can imagine. Sir James Grigg, as War Minister, is wisely resolved not to ask men to look like that when they leave the forces. The Austerity Clothing rule for clothing soldiers on demobilization having been relaxed, it will not be practicable to maintain restrictions for the general public. So permanent turn-ups and more pockets than are really needed will be on order again, and men who like to dress as they always have dressed will be contented. But it seems to many women that men have behaved in this matter more like "slaves of fashion" than the sex which is usually labelled in that way. Philip Snowden, when he was Chancellor of the Exchequer, once calculated that, if every Chinese coolie were to add an inch to his shirt or blouse, or whatever his upper garment is called, the cotton industry in Lancashire would be prosperous as never before. So I'm told that the extra cloth needed for turn-ups will require much more shipping space to be allotted to wool, which is not a good thing at all, if it's true; but I hae ma doots and I seriously question if any shipping space was saved while Austerity ruled in men's clothing.

IT is not only Roman Catholic bishops and archbishops who are worried about the increased number of marriages the law is being asked to dissolve. At the present rate of increase the Divorce Court will soon need as many judges as the whole of the several King's Bench Courts put together. The war has something to do with it, a good deal probably. Absence does not always make the heart grow fonder. Sometimes it weakens fondness to such an extent that the heart shrinks from the thought of returning to the absent one, and starts a new adventure. This has happened to many wives and husbands during the past five years. It is all very well for the old lady of 83 who lately celebrated her sixtieth wedding-day to say that all married people would get on famously if they would only practise "give and take." Normally that is true of most marriages. But when one partner is at one end of the world and the wife or husband at the other, that formula has no validity. Letters can do a great deal to keep the tie of affection firm, if they are regular and frequent, and if written with the aim of keeping the absent one in touch with home concerns. A lot of today's divorces are due to wives not taking enough trouble in this respect.

THAT "the whole wage structure" in the coal-mining industry needs overhauling and simplifying, as the Government has suggested to both owners and colliers, is undeniable. The way miners' wages are calculated is extraordinarily complicated. When the negotiations were going on years ago which might, if they had succeeded, have averted the nine-days General Strike of 1926 as well as the long-drawn-out misery of mining workers for several months of that year, the leaders of both sides complained in private of Mr. Baldwin's "stupidity" in not being able to follow quickly their discussions and proposals. The truth was that they were talking about terms and calculations which were familiar to them, while he was making acquaintance, for the first time, with the system which had grown up over a very long period and become almost unintelligible to anyone outside the industry. There seemed no reason then, as there is none now, why all the figuring, the adding and subtracting and percentaging, should not be wiped out and a method substituted which would be on all fours with those of other occupations. Perhaps it might even be possible to evolve a general scale of wages for the whole of the pits, not different scales for different localities. If we could get this "reformed altogether," in Hamlet's words, we should have reaped one benefit from war.

Lieut.-General W. J. SLIM, C.B.E., D.S.O., M.C., whose appointment as Commander of the 14th Army in South-East Asia was announced on Jan. 24, 1944. Aged 52, his regimental service was with the 6th Gurkha Rifles. Whilst a brigade commander in the 5th Indian Division he was wounded in the Eritrean campaign, in 1941. *Photo, British Official: Crown Copyright*

RUMMY is a capital card game for a number of people. I have played it often when I couldn't get Bridge, which is very much better. And I have always had a theory that Rummy was derived somehow from Poker—at a good many removes no doubt, but in a direct line of descent. Now that notion is strengthened by what came out the other day in a London police-court. The keeper of a gambling house was in the dock and it was stated by the police who raided the place that the game being played at the time of the raid was Double Rummy. Devotees of what seems to them a quiet family game, at which you can lose a few coppers, if you play for money at all, will be astonished to learn that it is in favour at gambling clubs where large sums change hands. The proprietor of the one that attracted the attention of the police was said to be making as much as £5 an hour out of it. Suppose he kept open from eight p.m. till two a.m., his income would be over £10,000 a year, more than we give our Prime Minister. It's a queer world!

I WONDER how mothers in Canada have taken the counsel offered them by the head of the Dominion Medical Service. He thinks they bring up boys too softly. They don't, he suggests, train them to face the hard experiences they may have to go through. They make them what are sometimes called "mothers' boys." It seems a curious charge to bring against Canadian parents. From what I have seen of life on prairie farms and in the logging camps of British Columbia, and on board the huge grain barges that ply on the Great Lakes, I should say this eminent doctor's view must be based on a few cases that have happened to come to his notice, not on a carefully conducted survey of the country as a whole. I have also memories of Canadian troops which make me certain that the accusation must lie justly against only a small number of mothers. They would all be in the cities, where, as in the United States, there is a deplorable tendency for mothers to spoil their boys by too much solicitous care, too careful watch on their health and activities, too easy giving-way to their demands. But most Canadians live away from cities and their miasmatic moral influences. So I don't think we need worry.

IT is very interesting to notice the difference between the praise Lord Woolton used to get from the Press when he was Food Minister and the critical tone almost all newspapers, including the heavies as well as the lighter skirmishing forces, adopt towards him as Minister for Reconstruction. He is the same man, capable, prudent, cautious. He has much the same problems with which to deal. After all, providing houses is not so very much unlike providing bread, meat and bacon. At any rate, it requires the same qualities of mind and character. How explain the change? I think I can do it. Food Ministry headquarters are staffed by an exceedingly able set of men, and throughout the country they are assisted by experts. The nominal head, the Minister, has little to do except make speeches and answer questions in Parliament (that is so in most cases). Now Lord Woolton has at present only a nucleus staff. He must solve problems more or less for himself, and rely largely on his own judgement. Naturally he walks warily and wants time to ponder them. The critics should bear that in mind.

For the Greatest Assault of All Time

PERFECTING THE HANDLING OF INVASION CRAFT during arduous rehearsal, here are some of Britain's Royal Marines, who will be among the first to touch down on the enemy's western beaches when dawns the day of the great Allied assault. Many hundreds are completing their training as flotilla officers, coxswains and crews of these landing craft, combining admirably the skill of the sailor with that of the accomplished soldier. See also pp. 176, 628-630, 656-657.

Photo, Planet News

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